MARINE CORPS

Gazette

AUGUST, 1945 30c



Gazette

PROFESSIONAL MAGAZINE OF THE MARINE CORPS

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All pictures in this issue not otherwise credited are either official Marine Corps or Navy photos. P. 13. Coast Guard; P. 51, Marine Corps Schools, Quantico; P. 52 (right), Coast Guard; P. 54 (lower), U. S. Army; Chart on P. 21 Marine Corps Schools, Quantico; Emergency Kit story, P. 53, Sgt. Henry Felsen; Marines Get Themselves in Middle, P. 50, Pfc. Ross L. Rowe, Combat Correspondent.

This Month and Next

"Old Glory over Shuri" is MajGen Pedro A. del Valle's second battlefront discussion of the Okinawa imbroglio. "I'm pushing this to you," he says, "while it's hot." He reports again next month.

MajGen Lemuel C. Shepherd's analysis of the 6th-MarDiv's gallop north on Okinawa is also written from







Gen del Valle

Gen Shepherd

Col Coleman

the front. In "Battle for Motobu," Gen Shepherd tells how his veterans romped over the Jap in rugged mountain warfare.

Capt John McJennett (Air Power for Infantry) has joined the GAZETTE as Associate Editor. He was an







Maj McNicol

Col Griffith

Capt McJennett

aviation liaison officer and landing force air support officer at Tarawa, Guam, Leyte and Iwo.

Col W. F. Coleman, whose July article was marred by a GAZETTE error in the title, is back with "Let's Practice What We Preach," a sermon on brevity, the soul of an annex. He suggests that a commander ask himself: "If I had to write these orders in longhand, would they be so copious?"

The Jap isn't the only one who attacks at night. We did it at Okinawa. A battalion night attack problem will be presented next month by Col S. B. Griffith, CO of the 21st Marines.

Less than 3 per cent of all marines are unclassified. How marines are properly pegged will be described in September in "Classification—Marine Corps Style," by Maj P. B. McNicol.

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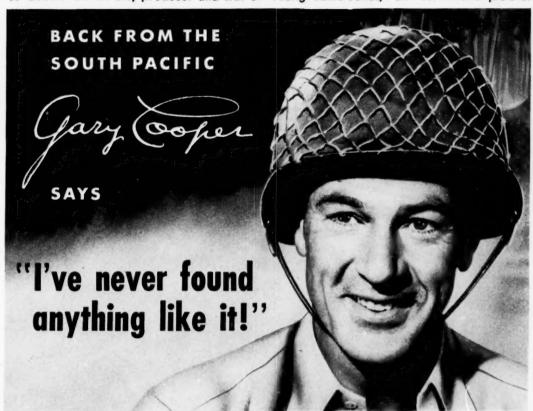
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* GARY COOPER, producer and star of "Along Came Jones," an International picture.



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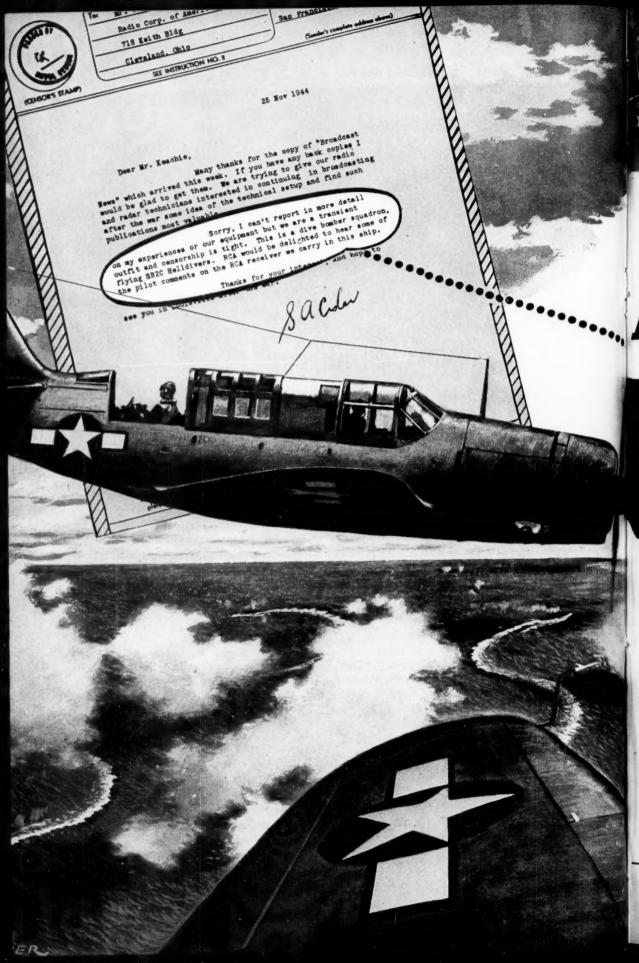


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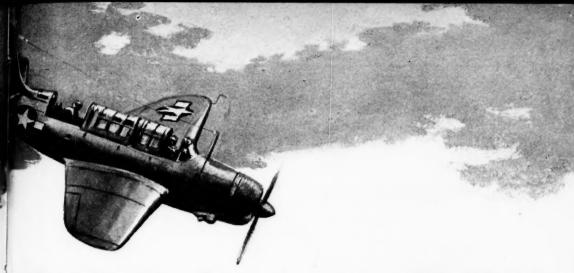
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RCA Radio in the Helldivers.

Sorry, I can't report in more detail on my experiences or our equipment but we are a transient outfit and censorship is tight. This is a dive bomber squadron, flying SB2C Helldivers. RCA would be delighted to hear some of the pilot comments on the RCA receiver we carry in this ship.

• Thanks, Captain Cisler. Your report, short though it may be, strikes us as a real compliment. The more so, in that it comes entirely unsolicited.

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Pacific telephone booth. U. S. Marine, burrowed in his foxhole, telephones for artillery to wipe out Japanese mortars.

From factory to foxhole it's a telephone war

In just one landing operation against the Japs, our Navy used more than seven hundred ships equipped with 48,000 telephones. With their switchboards and associated equipment, that's enough to serve a city of 160,000 people. These shipboard telephones were equipped with 5,000,000 feet of wire.

Add to these figures the needs of other naval units and the millions of men in the Army's ground and air forces and you get some idea of the tremendous amount of communications equipment required by war. It helps to answer the question of why telephone equipment is scarce on the home front.



BELL TELEPHONE SYSTEM

CURTISS WRIGHT FIRST IN FLIGHT

ommando NOW THE STANDARD TROOP CARRIER...

Long famed for their prodigious work as Himalayan "Hump Run" haulers, C-46 Commandos have been chosen the standard aircraft of the Troop Carrier Command. In their initial action, they precipitated paratroopers onto the German plain in the first Allied aerial crossing of the Rhine.



LONG RANGE— DOUBLE FIGHTING PUNCH

With an 1800 mile range and 36 paratrooper capacity, Commandos revolutionized airborne operations by doubling the fire and fighting power any previous American transport ever carried into action.

DOUBLE JUMP DOORS

New, double paratrooper doors on the C-46 enable simultaneous unloading from both sides of the plane. More troops can be spilled into a smaller area, can more quickly assemble in strength for strong surprise land attacks.



REPLACEMENTS BEING C-46 TRAINED

All future troop carrier replacements will be trained for C-46. Commando operations, Transition training has already been given units overseas. This world's largest and fastest twin-engine transport is detined to play a part of increaing importance in America's expanding aerial warfare.

CAN TOW GLIDERS

Its ability to tow all types of gliders from the CG-4 to the newest, largest CG-70 "Trojan Horse", plus its greater power and range make the Commando ideally practical for the longer reaches of the Pacific war theater where the C-46 is destined to see plenty of action,



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Washington, D. C.

Lt Millard Kaufman's article on the "Attack on Guam" in your April issue was interesting. Inasmuch as the GAZETTE is the Professional magazine of the Marine Corps, it wouldn't be comma chasing to point out a number of errors of fact in the account.

To cite a couple, the counterattacks against the lines of the Fourth Marines the first night ashore are erroneously shown in the illustration. The two in the diagram were feints and the real push-which came right down the middle into the lines of the 1st Bn Fourth Marines-is not pictured.

I believe the statement that the main body of the Jap garrison was "hermetically sealed in death" on Orote peninsula would be very difficult to substantiate.

Errors of omission are impossible to avoid-but Mr. Kaufman should have mentioned that Guam stands as the model amphibious assault. Not one important flaw: well planned, perfectly timed and vigorously executed. Evidence: only 12,000 of the 21,000-man Jap garrison got a chance to participate in the organized defense of the island. The remainder were cut up and fought ineffectively in small groups.

The Fourth Marines were with the Brigade, too. Honest!

ONE WHO WAS THERE

-FPO, San Francisco

Have just finished reading your article "Attack on Guam" by 1stLt Millard Kaufman in your April issue.

I was attached to Co E, 22d Regiment, of the First Provisional Brigade, at the time, and I wish to say this story is one of the most comprehensive and truest accounts of any battle I have read since coming overseas. I should know, too, because I was there.

I am no longer attached to the Marine Corps. At the time I was detached I had spent 22 months with the Marines, 20 overseas. I went through two invasions with them, the Marshalls and Guam. To me they are a great bunch.

I received a letter several days

ago from a friend who is still in the Marine Corps. He said the First Provisional Brigade had been awarded the Navy Unit Citation by the Secretary of the Navy for its outstanding work on Guam. I am inclined to believe the Brigade is the first large unit to receive this award. Am I right?

W. B. KELLY PHM1/c

(All personnel serving in the First Provisional Marine Brigade, comprised of Headquarters Company; Brigade Signal Company; Brigade Military Police Company; Fourth Marines, Reinforced; 22d Marines. Reinforced; Naval Construction Battalion Maintenance Unit 515; and 4th Platoon, 2d Marine Ammunition Company, during the period 21 July-10 Aug 1944 are authorized to wear the Navy Unit Commendation Rib-

FPO, San Francisco Enclosed you will find two articles. one from the April issue of the GA-ZETTE, which states that Col David M. Shoup received the Navy Cross, and the other, from the Bureau of Naval Personnel Information Bulletin, stating that Col Shoup received the Medal of Honor.

Did Col Shoup receive both medals? If not, which one did he receive?

PFC JAMES B. PRATT

(The GAZETTE did not say Col Shoup received the Navy Cross. The



Col Shoup w/decoration

drawn when, with additional information, the case was referred

to the Secretary of the Navy. On reconsideration, the Medal of Honor was approved by the President, in lieu of the Navy Cross.)

FPO-San Francisco

You published an article last November, "Arms for Officers," which said that anyone who is "well skirmished" no longer carries a pistol, and that it's a weapon for those who want to play Al Capone.

For the past 20 months I've been

carrying a .45. In that time I've used it many times. It's been effective or I wouldn't be writing this. In fairness to a good weapon why don't you tell the other side of the story?

FOUR NOTCHES

(The GAZETTE will print both sides of the Pistol-Carbine dispute next month.)

San Diego

Major Donovan's article in the December 1944 issue of the GAZETTE on uniforms calls forth several more suggestions.

1. Why cannot shirts be made with holes in the collar to take collar insignia? (Figure 1.) The insignia could then be snapped into the correct place without the usual fumbling.



Fig. I

black.



2. In summer service without a cap or blouse a marine is unidentifiable. Why not an insignia for the left collar in enamel? (Figure The background could be red and the emblem worked in gold and

MARINE CAPTAIN

Bucks County, Pa.

I suggest that the greatest possible care be taken to check historical data in articles sent in for publication. The GAZETTE is contemporaneous history and will furnish source material for generations to come. Later "correction" of mistakes in original articles will be confusing to the student and writer.

COL GEORGE VAN ORDEN, RET'D

FPO San Francisco I have just read the March 1945 overseas edition of the GAZETTE.

In the article on aviation by Capt C. J. Greene Jr., on page 51, there has been committed an error of omission, I believe. I quote, "The last four squadrons are VMF, flying Chance-Vought Corsairs." Actually, only three squadrons are named.

May I add the name of the commander of the fourth and missing squadron, namely Maj Robert T. Kingsbury, commanding the Hell-Lions?

TECHSGT LEWIS SLEPIN



Dark Horse on Iwo The 3dMarDiv, in the flooting reserve

at Iwo Jima, didn't go ashore on D-day. But when it did, it surged across the island in powerful drives that had the punch of coordinated supporting arms. By Maj R. D. Heinl Jr.

This is the story of a Marine division which nobody thought would land—the floating reserve which might be employed piecemeal, but for which there would be no room as a unit. And this is how it landed and how it fought.

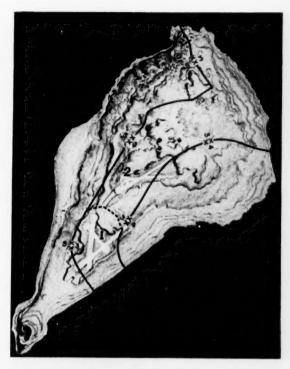
This is the story of the Third Marine Division at Iwo Jima.

Thas been estimated that news correspondents ground out 1,168,575 words during the Iwo Jima battle. How many times the phrases "black volcanic sands, sulphur-fumes, lava crags, labyrinthine caves" and the like were repeated can never be estimated. These repetitions sprang from an inability to convey to anyone not present just what Iwo was. Hell-hole is mild; the pioneers who first saw the Badlands of the West had a better description: hell with the fire out. That is close. To visualize Iwo, take a look at the worst of our American deserts and multiply by two.

To a military eye, Iwo Jima is shaped like an unbalanced dumb-bell, with Mt Suribachi at one end joined by a long, narrow ridge to a considerable land-mass at the other, the long axis of the island running generally northeast-southwest. The terrain, where not composed of volcanic sand-dunes originally anchored by scrub growth, is solid lava, full of unholy crevices and jagged edges and caves. A few islands and reefs lie off Iwo. Of these, the only ones worth mentioning are Kama and Kangoku Rocks, both of which are less than a mile off the northwest shore. Kangoku, which means prison, was the island brig, the subject of many a wisecrack; it was as if hell had a sub-basement.

In describing Jap positions or defensive organizations of the ground, many terms lose their meaning. There were no lines, no perimeters. Iwo was one solid, coordinated defense, the density of which has never been exceeded in any objective taken by American arms.

Against air attack, there were 120-mm naval guns (dual-purpose, at that; the sort mounted aboard destroyers and in the secondary batteries of larger ships), twin 25-mm automatic cannon in profusion, and any number of smaller AA automatic weapons. For coast and beach defense, the enemy relied upon 6-inch and 4.7-inch guns (not to men-



21st Marines entered the attack on 22 Feb.

tion many less formidable calibers) casemated into massive emplacements with six and eight feet of reinforced concrete surrounding them, and set in rock and sand. Over the entire island was an interlocking set of caves, dug-in tanks, pillboxes, and blockhouses, each supporting the other and all covering minefields. Remarkable fields of fire and observation were afforded by the airstrips. To top all, there were giant mortars and rocket-positions. Heretofore, the 320-mm spigot mortar, with its 670-pound shell, or the rocket buzz bomb, had been abstractions in intelligence summaries. On Iwo, they turned up in three dimensions.

That was Iwo Jima—a tiny volcanic atom, stinking of sulphur, not worth 50 cents at a sheriff's sale, five miles long and three miles wide—but 700 miles from Tokyo.

To overpower the estimated 14,000 Nips on Iwo, it was planned to employ two divisions of the V Amphibious Corps, landing abreast on the so-called East Beaches (actually southeast), with another division, the Third, afloat in reserve.

The two divisions landing in initial assault, the Fourth (on the right) and Fifth, would secure a beachhead, cut across the narrow neck of land just



Twin 25-mm AA lay hidden in caves of honeycombed Hill 200-P, where Jap marines staged their fanatic defense against the Ninth. Their cannon swept Airfield No. 2.

below Suribachi Yama (as one might nip off the triangular head of a snake), and then turn, so that the two divisions, less a regiment, would face northeast, up the long axis of Iwo. The extra regiment from the Fifth would reduce Suribachi.

To soften the island, the Strategic Air Force had devoted 74 days of high-altitude bombing, but the real grinding was to be provided by three days of intense bombardment by a battleship and cruiser task force. After one look, the commander of this force decided he had enough to do just making a landing possible, let alone giving the rest of Iwo Jima a point-for-point drubbing.

What was not understood in the preliminaries, and could never have been anticipated, was the incredible density of defense, and the jam-packing of Jap troops on the island. And when, a few days before landing, these factors became apparent, estimates altered radically. It was simple arithmetic: if there were 20,000 Japs on Iwo, one-third more than our estimates, it would require more marines—Third Division troops.

Even the weather helped make landings on 19 Feb successful. So well had Admiral Blandy's task force, and carrier-aviation, done their jobs, that the two divisions stormed ashore almost without opposition. The Fifth Division, in a swirling advance behind the rolling curtain of naval gunfire, crossed the island before nightfall, but the Fourth was already receiving heavy indirect fires of mortars and artillery upon its beaches.

Supply would be difficult across the debrischoked black sand which seemed to swallow up every sort of vehicle except LVTs. And casualties were beginning to mount. All too plainly, it might be necessary to order in one regiment from the Third. On 20 Feb, therefore, the 21st Marines boated for landing to reinforce the Fourth Division.

Meanwhile, the weather turned. Winds rose and clouds hung low. On the beaches, where unloading was hampered by sand and embarrassed by continual indirect fire, mounting seas delayed progress. Although the 21st was boated and ready to land, it became necessary to delay it offshore for miserable hours of wet, seasickness and cold. By night, the men were happy to reembark (all but a few miserables too seasick to climb back aboard ship). They spent the night in the LCMs.

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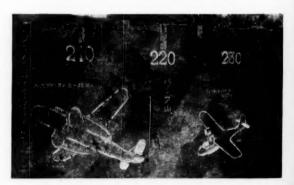
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Next day, 21 Feb, things moved better, and, by 1800, the regiment was ashore and in an assembly-area, under the lee of the south edge of No. 1 Airfield. Enemy harassing fires, always attentive to the beaches, were unusually so this night, with rockets, giant mortars, and all calibers of artillery. But not a casualty was suffered.

Next morning, before dawn, the regiment began relief of the 23d Marines, which was holding precariously to the sandy crest overlooking Airfield No. 1. Heavy fires impeded the relief, and the regiment narrowly missed a tardy jumpoff; but at 0835, with the 1st and 2d Bns abreast, the attack was launched. From the outset, it was a slugging-match. Enemy pillboxes and bunkers seemed to be dug into every sand-dune. Going was uphill. Every yard was covered by such enemy weapons as the nest of twin 25-mm antiaircraft cannon in the center of the



In the emplacements were chalk murals depicting every known kind of U. S. plane.

zone, or the stoutly-held Navy battery position of 120-mm dual-purpose guns (which had to be taken by flamethrowers and riflemen after the guns had long been knocked out). By nightfall, the 2d Bn had shouldered forward on the left to within 200 yards or so of the jutting southwest end of Airfield No. 2. On the right, it was anybody's battle, with hardly more than 50 yards to show for a hard day's work.

Dislodging the enemy from the end of the field would be a prime requisite if the right battalion were to advance up the concave amphitheater formed by the intersecting runways, let alone accomplish a crossing of the strips, swept as they were by flat-trajectory fire from machine-guns and light antiaircraft weapons sited to the north on such commanding ground as Hills 199-O and 200-P, and Hill 382.

Thus, the morning's fight by the 2d Bn (English) was a series of attempts to get up onto, or around, the steep sandy runway-end, while Williams of the 1st Bn, pinned down by automatic weapons and pillboxes, remained virtually in place until after 0930. By the day's end, after a furious assault, the left of the 21st Marines was hooked around the curved embankment, and the right, so long held down, had muscled into the angle of the converged runways. The 1st Bn was, for the time being, spent, and the 3d (Duplantis) launched the next morning's attack. Mission and objective: to get across the east-west airstrip.

It was 24 Feb, at about 1300, that men of the 3d Bn, 21st Marines, after three attempts, managed to cross that fireswept hundred yards to the far side. Tanks of the Fourth and Fifth Divisions during the morning had made massed attacks up the northeast-southwest runway. What the tankers learned (the hard way) was that high-velocity, hollowcharge 47-mm antitank guns commanded every inch of the narrow strip, and that the Nips had laid two-horned mines all the way. When the tank attacks ground to a stop, the flaming wrecks, some of them with neat round holes punched in their skins, others with tracks and bogeys sprawled about, remained behind, derelict. Clearly this job would be for riflemen. For example, Company K of the 21st Marines: Flattened out against the fill along the runway-side, scouts, then rifle teams, would spring up. The Jap would hold his fire, and more marines would follow. Then, halfway across, on land as flat as a parade-ground, the Nips would cut loose with rifles, machine-guns, mortars. everything; and what was left would stagger back again. That happened twice. The third time, they made it.

Holding the far side was not easy. There were two enemy counterattacks during the afternoon. Neither can be described as perfunctory, and there was infighting with grenades and cold steel in the broken, sandy flat just north of the center of the field. But by late afternoon, not only was the 3d

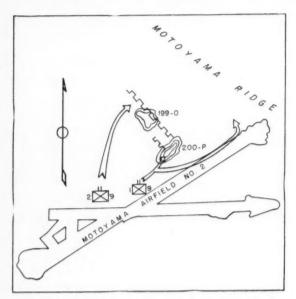
Bn firmly established across the runway, but the 2d Bn, whose battle around the end of the strip had continued, managed to get one company forward into the taxiways and plane-revetments to the left rear of Duplantis' men. The position would be held.

Meanwhile, the Third Division, after hours of exasperating inactivity afloat, had received the word: "You will land on 24 February (still less the Third Marines), assume control of the whilom zone of the 21st Marines (now reverting to parent division), and continue the attack." The Third was in the fight.

THE ridges of upper Iwo form a horseshoe or U, with the two sides paralleled across the Division's line of attack, and commanding as well the zones of the Fourth and Fifth Divisions to right and left. Insert Motoyama Village (now a road-junction and a heap of rubble) in the deep curving bottom of the U, and Airfield No. 3 farther to left (northwest), and still inside the interior depression. Atop the first ridge, and on its forward slopes, visualize a closely organized defensive position; imagine bunkers, pillboxes, minefields, a profusion of flat-trajectory antitank and antiaircraft automatic cannon, the whole backed up by mortars in the treacherous gullies and crevices on the rearward slope. To make it vivid, add heaps of sulphur-ash, hot volcanic pot-holes, and steam and smoke puffing from the ground. Upon Motoyama Ridge, just described, rested one of the enemy's main positions, "a fortress-like defensive organization," the Division war-diarist comments, "likened only to that encoun-



Deep caves in rock hills made the going rugged before the 21st's break-through.

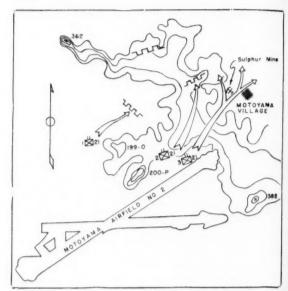


On 27 Feb the Ninth struck twice-it worked.

tered in the lines of World War I or in the great fortified sectors of the present European war."

Although the fighting of 26 Feb, with the Ninth Marines now carrying the ball, had yielded scant yardage, the nature of the ground taken was critical. The cave-riddled hills at 199-O and 200-P, the one with its battery of 120-mm naval guns and the other with fanatically-defended twin 25-mm antiaircraft guns, had impeded the Division's advance through the entire zone and provided a formidable outwork to the ridge-lines forward of Motoyama Village. Both hills were more or less in the hands of the Ninth Marines, with Cushman (2d Bn) on the left, and Randall, with his 1st Bn on the right. Cushman was extended among the caves, grottoes and bunkers, while Randall bestrode the airstrip, looking up the ridge.

On 27 Feb, the first of many intense artillery and naval gunfire preparations was stacked in front of the Ninth as they continued the attack. With 105s, plus Corps 155s, and 5-inchers from destroyers, Cushman managed to make 150 yards on the left, only to be stopped by flanking fire from his right, where the 1st Bn was still pinned down in front of the battered airfield radio-weather station. By noon, it was decided to repeat the preparation, and attack



The 21st Marines broke through on 28 Feb.

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again. Everything, it was reasoned, depended upon the assault units moving out on the heels of the preparation. So at 1250 on 27 Feb, the regiment again attacked.

It worked: by nightfall, Cushman had moved 600 yards, and Randall had possession of 200-P and the balance of 199-O. Had it not been for bypassed snipers—Nip marines, who died hard in the crevices of 200-P—the attack might have surged still further, but fire from the hills in rear discouraged the advance—mopping up would require two more days before a man could walk upright in that area.

The fighting on the 27th had exhausted the Ninth Marines. Since the Division still had no reserve—the Third Marines being held out afloat as Expeditionary Troops Reserve—the 21st went in again the next morning, 28 Feb, with the 1st Bn on the left and the 3d Bn on the right. From the previous day's combination of weapons supporting the main effort, Gen Erskine hit upon a further refinement: after King-hour, a rolling barrage let the assault units move out behind a rapidly-advancing curtain.

It was terrific. For 49 minutes, the concentration of 105s, 155s, 5, 6, and 8-inch bursts rolled forward. Supporting the jumpoff was every infantry weapon



Marines of the 21st jump off toward Airfield No. 2 in the early days of the battle.

in each regiment, pouring in mortar and automatic weapons fire between the barrage and the riflemen. On the left, an immediate advance of over 200 yards was made by Williams before the stunned Japs could begin to deliver intense mortarfire from behind the ridge. Duplantis, on the right, surged forward and was on the high ground at the upper end of Airfield No. 2 before noon—the nest from which Nip 47-mm antitank guns had knocked out Evans' tanks.

Impetus of this attack must not be lost. A clean breakaway was in progress, with a deep wedge driven in towards Motoyama Village, and the enemy reeling. At 1300, the treatment was repeated, with Williams and Duplantis again attacking behind the combined fires. As an added feature, Boehm's 3d Bn, Ninth Marines, was attached to the 21st, ready to punch through any soft spot.

Within an hour, Duplantis had knifed forward (the soft spot apparently had been waiting readymade). The ridge was crossed, the enemy's main battle position divided, and Motoyama Village, long since levelled, was in our hands. But Williams was not so fortunate; again his attack was stymied by intense mortar and small-arms fire, with little to show except local gains amid a sort of petrified jungle of basalt chunks and lava crags, tunnelled deep with traversed caves and chambers 20 and 25 feet straight underground. For variation, there was refuse and rubble from the sulphur mines, and steaming, stinking slag-heaps.

Meanwhile Duplantis' rapid advance had created a gap between his left and the pinned-down elements of Williams' 1st Bn. To plug this, and to outflank the resistance confronting Williams, the 2d Bn, 21st Marines, under English, was ordered in during the afternoon. Despite another solid preparation of supporting weapons, English was halted behind his Line of Departure (just west of the sulphur mine) by heavy small arms and mortar fire and was unable to close up behind his barrage. Result: the late afternoon attack progressed slowly against numerous pillboxes and bunkers on a rearward spur of Motoyama Ridge.

The day's work, however, had been notable. No longer could the Nips sit atop Motoyama Ridge with observation and fields of fire commanding every inch of lower Iwo; no longer could they move about unobserved in the depression about Airfield No. 3. The Third had burst into their workshop. The Division was bivouacked in their parlor.

(After the Motoyama breakthrough, it seemed—briefly—that the road to the sea was open. A series of headlong fast-stepping attacks punched across the low ground until the Division was at the foot of that last ridge-line—the other leg of our horse-shoe—beyond which was the sea. But on the night of 2 March, while the next day's battle-plan was being worked out, the G-2 carried into the blacked-out command-post a captured map. It says here: this is no scratch resistance that we have to our



One of light AA cannon that held us up. Cushman's Hill 199-0 rises in background.

front; the opposition that Randall ran into this afternoon is the outpost-line of a thickly and methodically organized center of resistance to our right front, commanding our zone from a hill [what was it—362?] which is larded with deep ravines full of pillboxes, caves and bunkers, and studded with all calibers and types of weapons; we are up against something).

A^T this point, the Third Division zone crosses what in effect is a saddle: on the northerly end rises Hill 362, in what was target-area 235-U on the battle map; on the southern, or right, end, it is anchored to a second Hill 362, in target-area 219-U. Each one is of commanding importance, and upon each was formidable resistance. The Division's final breakthrough can be summed up in an account of the battle for the Hills 362.

The fighting of 2 March was in effect two separate actions, each directed toward securing one of these hills. The 21st Marines on the left (with Boehm's 3d Bn. Ninth, attached) was extended westward and south, where the Fifth Division was groping for contact. Boehm, on the left, had worked almost to the top of 362 (the northern one) by early afternoon, only to be met by "a sudden, prolonged and intense burst of fire," as the war-diarist puts it, not only from small arms and machine-guns, but from two or more 75-mm guns which swept the approaches. The ground was bad: no fields of fire or

The Battle for Motobu Peninsula

The 6th MarDiv Commander tells how his outfit cleared Northern Okinawa in a romp through last-ditch strongpoints and mountain terrain. By MajGen Lemuel C. Shepherd

THE Sixth Marine Division landed on the Yontan Airfield beaches on Okinawa Shima on the morning of 1 April 1945, and executed a swift advance to the northward covering 25 miles of rugged terrain in eight days against a steadily retiring enemy who vigorously defended strongpoints in his rear as he withdrew.

On the afternoon of 8 April 1945, the Division captured the large town of Nago. Intelligence indications had been growing throughout the advance that the enemy which had withdrawn to our front planned to make a determined final stand in the mountains of the Motobu Peninsula. Events which followed demonstrated this deduction to be well founded.

On the morning of 7 April, the 29th Marines, moving in three columns, one along the north, one on the south coast, and the third up the center of the Motobu Peninsula, commenced its efforts to locate the enemy's main force. Light resistance was encountered by all columns, and the character of the opposition was such as to indicate without question that a force of considerable proportions confronted the Division.

From 8 to 13 April, the 29th Marines, supported by tanks, engineers, and armored amphibians, which were employed as artillery, conducted continuous probing operations, gradually developing the character of the enemy situation. During this period frequent contacts were made in the rugged territory northwest and southwest of Itomi. Ambushes were frequent, and the enemy's employment of artillery gradually accelerated. Counterbattery fire was experienced on one occasion by one artillery battalion, whose position areas were accurately shelled on the afternoon of the 13th.

At the same time, night counterattacks increased in frequency. One particularly bitter fire fight occurred during the night of 10-11 April, when the enemy made a suicidal attack on the defensive perimeter of the 1st Bn, 29th Marines. The attack. supported by artillery, mortars, machine-guns, and 20-mm antiaircraft cannon, was broken up in close hand-to-hand combat shortly before dawn. During operations on 10 April, the 2d Bn, 29th Marines. on the right flank seized Unten Ko, an enemy midget submarine and torpedo boat base. Upon the approach of the marines, the base was hastily abandoned, four midget submarines sunk, and much equipment and supplies left behind. Naval personnel, numbering about 150 Japs, were reported to have moved into the mountain area to the westward.

On the 12th, the Sixth Division Reconnaissance

Company was assigned the task of passing through the left of the 29th Marines, reconnoitering the Bise area and, if resistance was light, to seize and hold the point. As anticipated, resistance encountered was not heavy.

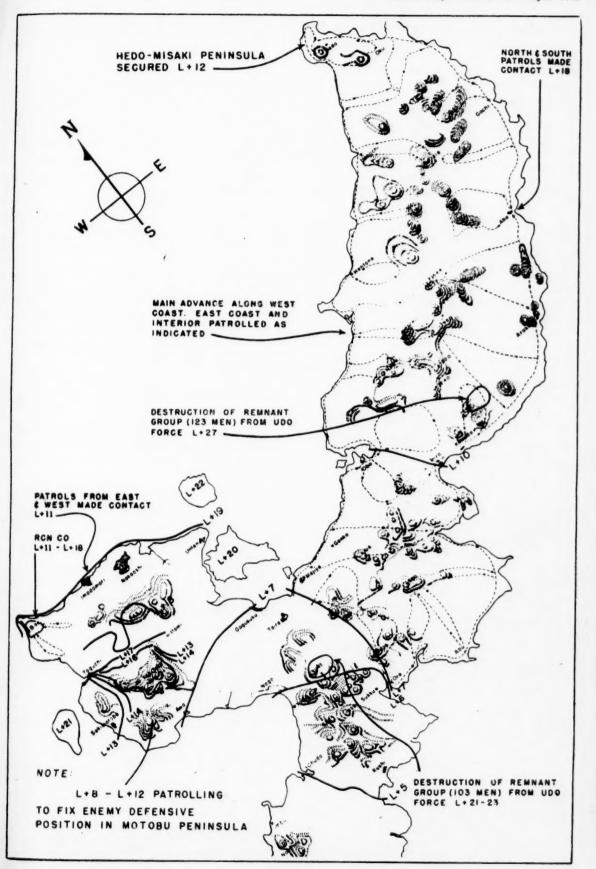
By the 13th, the enemy situation was thoroughly developed and the hostile position firmly fixed. At that time, the 29th Marines was disposed with the 1st and 2d Bns in the Itomi area and the 3d Bn in the vicinity of Toguchi. Mounting intelligence indications placed the enemy strength at 1500 to 2000 troops, including infantry and artillery. The position selected for the final battle was rugged in the extreme and was built around precipitous Mt Yaetake, the key terrain feature on the Motobu Peninsula. This large mountain, a confusion of steep cliffs, deep ravines, and extraordinary outcroppings, was honeycombed with caves and interconnecting tunnels.

The Mt Yaetake area had been intelligently selected and thoroughly organized. Its commanding elevations provided excellent observations of all Nago Wan as well as the outlying islands, including Ie Shima. Furthermore, the character of the terrain precluded the employment of mechanized equipment in its reduction. Actually the terrain was of such an impassable nature that it offered serious difficulties even to light infantry. The Japs had obviously been industriously engaged in making their fortress impregnable. All likely avenues of approach into the position were heavily mined and weapons were carefully placed to cover attack from any direction. Intelligence indicated the force defending the Yaetake area to be built around elements of the 44th Independent Mixed Brigade. known as the Udo Force after its commander. Its composition included infantry, machine-gun units. light and medium artillery, Okinawan conscripts, and naval personnel from the submarine base at Unten Ko. In addition to the supporting artillery which consisted of 75- and 150-mm guns, the enemy had emplaced two heavy 6-inch naval cannon capable of bearing on the whole of Nago Wan, Ie Shima, and the coastal road for 10 miles south of Motobu.

Upon study of the situation, it became apparent that additional troops would be required to reduce the enemy stronghold. In consequence, the Fourth Marines, less the 3d Bn, was moved to the vicinity of Sakimotobu, while the 3d Bn, Fourth Marines, was placed in Division reserve in the vicinity of Awa. A coordinated attack was planned for the

Daily progress of 6thMarDiv after L+5





early morning of 14 April with the Fourth Marines (3d Bn, 29th Marines attached) driving inland in an easterly direction, while the 29th drove west and southwest in an effort to reduce the enemy position by action from two flanks and isolate the enemy forces on Mt Yaetake from those in the northern tip of the Motobu Peninsula.

It is of interest at this point to examine the character which the Motobu operation had assumed. The high Yaetake hill mass intervening between the two assault regiments permitted the rare and interesting situation wherein two large forces of combined arms could attack in opposing directions without great

danger of overlapping supporting fires.

The attack of the 14th proceeded as planned, in the zone of the Fourth Marines, where the initial high ground set as the day's objective was seized. Resistance was bitter and casualties high, the Japs selling every inch of ground dearly. During the progress of the day, one battalion commander was killed, and several company commanders were casualties. As the attack developed in the 29th Marines' zone, it became clear that the enemy was so disposed as to render further advance in a westerly direction difficult and costly. The attack was, therefore, reoriented to move initially in a southwesterly direction in order to assault the Yaetake position by a more favorable avenue of approach.

On the 15th, the attack was resumed at 0900. The Fourth Marines, with the 3d Bn, 29th Marines, still attached, drove inland, fighting its way up the steep slopes of Mt Yaetake, encountering many pillboxes and caves. In the late afternoon, the 1st Bn, Fourth Marines, seized, lost, and subsequently regained a key hill mass immediately southwest of the Mt Yaetake peak. The fighting in this area was extremely bitter, as the enemy, entrenched on the dominating terrain covering all approaches, was able to bring heavy and effective fire on assault units as they climbed the steep mountainside. Final success was achieved only after the execution of a

vigorous bayonet assault.

During the day, the 29th Marines continued their drive into the rear of the Yaetake position, advancing in a west and northwesterly direction, encountering intermittent resistance throughout the period and, by constant pressure, assisting the Fourth Marines. Concurrent with the day's offensive activities, the Fourth Marines moved the 3d Bn northeast from Awa preliminary to initiation of operations against the southern flank of the enemy position on the following day. During the day, casualties continued to mount, and evacuation was extremely difficult due to the precipitous nature of the terrain. Hospital corpsmen were forced to cling to bushes and rock outcroppings as they dragged the litters down the steep slopes to dressing stations. There were 1120 enemy dead counted, and the number sealed in caves unquestionably was quite as large.

On the 16th, the Division was disposed to attack the enemy position from three sides. The 1st Bn,

22d Marines, assembled in Division reserve in the vicinity of Awa to relieve the 3d Bn, Fourth Marines, was directed to advance northeastward and establish contact with both assault regiments, thus closing the gap between the two and forming a continuous line around the south, east and west sides of the enemy position. This day, which marked the heaviest fighting of the Motobu operation, resulted in complete envelopment of the assigned objective. At dark, the Fourth Marines had seized the Mt Yaetake hill mass, while the 29th Marines had swung its front to the west and north, destroying many fixed emplacements. The 1st Bn, 22d Marines, effectively closed the gap between the assault regiments, and the day ended with units disposed for a final push down the north-south ridges of the Yaetake position.

ON THE 17th, in a coordinated attack with the axis of the attack of the Fourth and 29th Marines gradually shifting to the northward, assault elements drove rapidly through the remaining Yaetake resistance, and the day ended with both regiments in contact on the high ground overlooking the Itomi-Toguchi Road.

On 18 April, following the vigorous fighting of the preceding days, activity in the Motobu area was confined to reorganization, resupply, and patrolling of the Itomi-Toguchi Road.

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On the 19th, a coordinated attack was executed by the Fourth and 29th Marines abreast, aimed at the seizure of the high hill mass remaining between the Itomi-Togushi Road and the north coast, which reconnaissance indicated had been strongly organized. This attack proceeded rapidly, meeting moderate resistance from enemy entrenched in caves and rock fissures. Nightfall saw the 3d Bn, 29th Marines, which had reverted to regimental control and had moved swiftly around the base of the Motobu Peninsula, to the right of the 29th Marines' line, in possession of the objective. Apparently the enemy had failed to occupy the previously prepared position in strength, although a considerable number of dead bodies was found, presumably victims of artillery and naval gunfire.

Movement to the north coast of the Motobu Peninsula was completed on the 20th. Intelligence at this time indicated that several hundred enemy troops had fled the Motobu trap and would probably attempt to escape from the peninsula to northern Okinawa. This estimate was later borne out.

On 21 April, following a night rubber boat reconnaissance, the island of Yagashi Shima was seized without resistance by the Fleet Marine Force Reconnaissance Bn which had been attached to the Sixth Marine Division. The force was transported from the mainland to the island on armored amphibians. The same process was repeated on the 22d, on Sesoko Shima. On 23 April, the Division

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Reconnaissance Company executed a daylight landing, mounted on and supported by armored amphibians, on Kouri Shima, likewise finding no resistance.

The Motobu operation may be characterized as mountain warfare of the most rugged sort. Infantry combat was at very short ranges, and the cave and pillbox positions demanded the heavy employment of flamethrowers and demolitions. The enemy had lost 2014 counted dead with an unestimated number sealed in caves and lost in ravines. The framework of the defense was most apparent from

the variety of weapons captured. These included 11 field artillery pieces of 75 and 150-mm caliber, two 6-inch naval cannon, and quantities of mortars, machine-guns, and 20-mm antiaircraft guns.

The formidable terrain, carefully-laid enemy defenses, and the furious resistance made a combination of circumstances, against which mechanization and heavy fire power could not be exploited. Accomplishment of the mission fell squarely on the shoulders of the individual marine, his rifle, and his bayonet—and the results are self descriptive.

Tracks for Sand

Wheels dig in, bog down on soft beaches. All-tractor landings urged as the solution.

By LtCol L. C. Hudson

THE first glance ashore at Iwo Jima showed transportation trouble. Half-tracks had got their front wheels ashore, then sunk to the axle in soft lava residual. The tracks could not push them forward and, as the LCMs retracted and swung clear, the half-tracks dug in and settled as following waves engulfed them. Jeeps landed close to a 'dozer might be pulled up to a road but only two of our battalion's seven were so fortunate. The



others spun their wheels, digging holes, then, as the sea rose and washed away the foundations, were either nearly submerged standing upright or toppled to their sides as support washed away. The one-tons that were to tow the 37s met the same fate. One 'dozer was working to snake off vehicles but, occasionally, it would be hit and its work interrupted for good parts of an hour while the driver was replaced or repairs made. Everything on wheels sank. Only the tracked tanks and 'dozers kept going. At night of D-day, one LVT(2) carried supplies to the battalion.

Organic transportation proved almost useless on D-day at Saipan, where we had similar difficulties from a different cause. Here reefs prevented us from landing in anything except LVTs and the one



narrow passage through the reef was used exclusively for LCMs to land tanks, until Jap artillery registered on this channel and made its use so costly that even LCMs were restricted until we got further inland. When we could use LVTs again, losses were high. Even after the battalion's jeeps got ashore, all but two were destroyed by gunfire. The Japs kept shelling the roads, and jeeps could use few alternate routes. So, there, too, troubles with supply; and supplying a battalion solely with two jeeps is rugged.

Wheeled transportation functioned well on Tinian, where there was never difficulty with transportation. The island was a sugar production center and a perfect net of roads crossed in all desirable directions. But such facilities are rare.

If a vehicle is to cross lava residue, swamps, mud and other soft terrain, it must be full-tracked. This seems fundamental. On the other hand, a wheeled vehicle is useful in almost everything else that a battalion does. We form and train where, if roads are not suitable, they are soon made so. Wheels serve to excellent use in economy of employment and they are easy to manufacture.

In my opinion, a solution would be to issue special combat transportation to units in soft terrain. In rear areas we should still use jeeps with trailers, one-tons, etc. Shortly before combat, the special vehicles could be issued and used so that all hands could become familiar with them, the wheeled vehicles being turned over to a depot.

At present, we could effect this change by allowing landing teams to use either weasels or LVTs. In the future, a weasel may be developed that has greater cargo space and can fit into an LCVP. That vehicle would receive my vote.



Marines Are Where You Find Them

By Capt Quirinus Groenewegen, RNMC

ATEST in marine combat units is a new brigade now training at a New River boot camp for independent operations in the Pacific. Most of us have seen war at its worst in Europe or Asia. Our weapons and gear are strictly GI, our tactics and tables of organization follow book, but we parade and salute like no outfit from either coast, and we talk like the Dutch.

That's what we are-Dutchmen, members of the Royal Netherlands Marine Corps.

Our goal is a combat outfit of marines for operations in the Pacific. Dutch DIs drill their own boots, who are arriving from liberated Holland on whatever ships they can find. These are volunteers whose spirit has not been broken by five years of Nazi oppression.

Organized in 1665, or 110 years before the first American detachment, the Netherlands Marines were all but wiped out by the Axis. Only ship and a few shore-based outfits escaped the Nazi breakthrough into Holland and the now legendary fighting for Rotterdam. After Soerabaya, where Col W. A. J. Roelofsen and his motor defense battalion put up such a gallant stand, the Marine Corps of Holland was down to about 400 officers and men. These few surviving custodians of the Corps' proud tradition carried on as best they could, their eyes and hopes on the future. Stray detachments could be found in the few remaining Netherlands overseas possessions and in allied ports all over the world. The Java survivors withdrew to Australia. Those in England tied up with British commandos for training, others became instructors for the Dutch Army. A few ship detachments carried on in the Dutch Navy.

Marking time, we were also planning. With Holland occupied, the war against the Huns was best carried on by the Navy, by the air force and by internal resistance. But with the fall of Germany. troops could be mustered for a come-back in the East. Thus, the problem was to assemble and train a cadre that could quickly turn liberated ex-soldiers, seamen and others into marines. It was apparent that facilities for training on a grand and rapid scale would not be available in a Holland liberated from Nazi vandals. So outside help would be necessary. The American Marine successes in the Pacific showed where best to look for jungle and island combat training. So in 1943, Dutch Marines began arriving at Camp Lejeune from the ends of the earth in commando garb, in tropicals, and in seagoing blues. Volunteers daringly escaped from Holland and Navy converts appeared in sailor suits. As all Navy boot camps were run by ma-



He wears the same uniform, too, except for a red shoulder blaze: Netherlands Marines.

rines, the changeover from bell bottoms to leggings was not too revolutionary. This aggregation of "unbeatable" Dutch was sent through the same camps and schools as their American counterparts. Specialists, trained first as infantrymen, were farmed out to service schools, while cadets joined American officer candidates at Quantico and then went on to specialist training. Senior officers studied at Command and Staff School, Quantico. The infantry group of this nucleus cadre completed its training in the Spring of 1944. They joined a British command in time for D-day and fought their way back to Holland, where they immediately set out signs and started recruiting. Now back at Camp Lejeune, they are running a boot camp for the countrymen they picked up abroad.

A Dutch marine gets 12 weeks of boot, four weeks of advance basic and then goes to a tactical unit. Selected men go to Quantico for artillery, to Pendleton for tanks or tractors, or to other service schools for specialties. Cadets get 13 weeks' elementary and preparatory training before Officers' Candidate School. All must speak English. When officer and specialist training is completed, the brigade will mass for field problems, landings and maneuvers, then shove off for the Greater East Asia Co-prosperity Sphere.

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Although we call it a brigade, the outfit would settle down to a regiment heavily reinforced with

supporting arms in an American command. Battalions, companies, and combat teams, however, are in the GI manner. Use of standard T/Os, tactics, and materiel makes the brigade a handy ally in the boondocks because it can operate as part of, or with, or in support of, an American amphibious operation. Then, too, it can take off on its own, like any American counterpart.

Indeed the similarities grow more striking every day at Hadnot Point, where already Hollander drill instructors sprinkle their Dutch with gyrene jargon and the Dutch boot beats his gums, sneaks sack time, and spreads scuttlebutt, all with an accent. He wears the same uniform, too, except for a red shoulder blaze which reads: "Netherlands Marines."

The close bonds between our two Corps are best

expressed in the words of Col M. R. deBruyne, acting Netherlands Marine Commandant:

"We shall write in our annals that the illustrious United States Marine Corps gave us help and support when we were without facilities to get on our feet through our own force. We have also had the privilege of being in daily contact with a corps which is writing history with very bloody but golden letters."

Then, too, there is a yarn, about the two salty, hashmarked top sergeants, one Dutch and the other Yank, who glowered in shamed disapproval when a column of WRs, at attention, smiled back at a passing platoon of grinning Dutch boots.

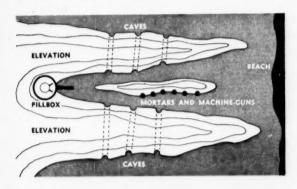
"Never like that," apologized each one to the other. "It was never like that in the old Marines,"

Oil Heat for Japs

By 1stLt John K. Wells

THERE is nothing stupid about Jap emplacements on high ground. There is nothing stupid either about their hidden bunkers, blockhouses and pillboxes with interlacing fire and supporting sniper

assaulting it, however, is possible. Planes and all large weapons can spread the oil or the oil mixture needed—before it is set afire. The oil should be given time to spread, and the whole area



WHOLE AREA
HEAVILY MINED

TRIP WIRES

PILLIOX

TRUNCH

APERTURE

DUAL PURPOSE CUN POSITION

nests, or their cliffs honeycombed with caves facing each other, or caves with multiple entrances and levels.

It is this writer's opinion, based on experience at Iwo Jima, that coordinated use of mass pools of flame with specially trained and prepared demolition crews will burn the Japs out of holes. This is not a new idea; Ghengis Khan hurled blazing pitch against forts with catapults. Flamethrower tanks and individual flamethrowers are already among our most effective weapons.

There are two ways to destroy such positions without great loss of life among our own troops. If gas is not to be used, then mass flame pools should be considered.

Against fortified positions naval gunfire, air power and all large ground weapons will provide necessary preparation. But these instruments do little damage to troops widely dispersed in caves and underground pillboxes of reinforced concrete.

Blanketing a fortified area with flame just before

heavily soaked. Armored cars or tractors might be devised for throwing oil, and these could move in under cover of tanks.

In an assault of this type, the highest degrees of coordination among all weapons and troops would be necessary. After the oil is set afire, a mortar attack is needed to kill Japs trying to escape. The mortars will also stir up the oil-soaked ground and fan the flames. If the Japs throw a barrage into the area, it will have the same effect.

Any positions not destroyed by fire would be taken as always, by flamethrower tanks, individual flamethrowers, demolition and firepower. Full advantage should be taken of the effect which the mass flame pools will have on the situation. Flame will use up oxygen from caves and pillboxes; the burning oil will provide a smoke screen for special demolition crews moving in to mop up. These crews, wearing asbestos suits, will move up with infantry protection. If their attack is coordinated the Jap will have little chance to meet it.

Air Power for Infantry The mounting effective-

ness of air support through Pacific campaigns to its maturity at Oki and Iwo. In future invasions, this weapon will find, fix and fight the Nip. By Capt John McJennett

HIRTY-SIX planes, each with two 500-lb bombs and eight rockets, worked over Jap artillery positions with highly satisfactory results. . . ."

"Fighters completed six missions for ground troops. A bridge, fortified buildings and gun positions were hit with bombs and rockets. The results were described as excellent."

The foregoing excerpts from official reports on close air support at Okinawa tell a story which goes deeper than the elimination of some Jap installations by planes. In a very real sense, the effectiveness of these strikes goes back to Iwo, to Pelelieu, to Leyte, to Guam, Saipan and Tinian. They go back over the trail of amphibious assaults to Tarawa and even to Bougainville and Guadalcanal, where an infantry commander walked into the operations tent to find out if a section of planes couldn't soften up a Jap position that was bothering his people.

The lessons learned in each campaign have been applied to the following one. Development has been steady. Uses for support planes have increased as techniques and tactics were tried, smoothed out and standardized.

A percentage of the effectiveness of close support on Okinawa, for instance, is directly traceable to Iwo.

From the point of view of close air support, Iwo Jima left a lot to be desired as a target. Good ground reference points were non-existent, and targets were almost invariably dimensionally small, skillfully camouflaged and well defiladed. Frequently, the sole effective air approach exposed our ground troops to considerable risk.

The battle arena itself, with three divisions abreast, was so compressed upstairs and down that at times the sky appeared as trafficked as the ground. Two close strikes could be run simultaneously only when the targets were on opposite flanks. Even when that precaution was taken a flight leader would call the control unit every once in a while and ask "what are those planes doing, pulling through the middle of our formation?"

Then too, there was the thick sulphur crust on the island north of Motoyama Airfield No. 1. General purpose bombs either broke up on impact or detonated harmlessly. That wasn't always so, but it happened too often, and because the Japs were almost entirely inside rock or concrete, strafing had little effect.

The U.S.S. Bismarck Sea sinking reduced the aircraft available to the extent that air support con-

"Starting on D-day and continuing throughout the battle, naval gunfire and air support by carrier-based planes contributed in heroic measure to the accomplishment of our mission." LtGen Holland M. Smith, commenting on the Iwo campaign.

trol units were hard put to find enough planes to satisfy the most urgent needs.

That these difficulties were overcome to a great extent justifies the two years of work by Navy and Marine air support people who learned by experience in combat, and developed the ground-attack plane as a hard-hitting, flexible and reasonably accurate weapon for the assault unit commander.

It would be untrue to say air support at Iwo was perfect-or nearly so. The time between ground's request for an attack and air's delivery of the strike was often too long. Early in the attack, the flow of essential information from the control units and the aircraft to the ground elements was inadequate. Later, irregular lines, close-in targets, and poor observation compelled the suspension of all transmissions on air request channels, except those relating to the strike in progress—a blackout as irritating as it was necessary. Other wrinkles, equally technical, needed smoothing.

But on no previous campaign have air attacks been run so consistently close to friendly lines. Hitting targets only 200 yards from friendly troops was not uncommon, and several times the planes teed off on positions only 100 yards from marine riflemen. Strike accuracy ranged from better than average to hits right in the V-circle. Seldom did single planes wander dangerously. They received targets promptly and attacks were run as speedily as the situation permitted. Maximum use was made of all available strike aircraft. Naval gunfire observation-fighters and combat air patrol divisions, coming off station with ammunition to spend and but 20 or 30 minutes of fuel, got targets they could effectively attack quickly.

TYPICAL of the strikes was one directed against a knot of positions on Hill 362-one of the dominant features of Northeast Iwo. From the Zone of Action of the Fourth Marine Division, one field piece enfiladed the right flank of the Third Marine Division and poured punishing fire into one battalion's lines for most of two days. Artillery and rockets

had been laid on in heavy concentrations without noticeable effect, due probably to a poor angle of fire. It was maddening. The hill was infested with holed-in Japs, but there was one prime target. From a battalion OP of the Third Division, it was possible to watch a pair of heavy steel doors open near the base of the hill, a heavy field piece belch fire, and the doors reclose. Upon request from a battalion liaison officer, whose unit the gun was pounding, the Marine Landing Force Carrier Air Support Control unit sent a strike of eight fighters and eight torpedo planes, toting rockets and 100 and 500-lb bombs. While the battalion making the request was nearly 600 yards in the clear, a unit to the south had pushed out to within 250 yards of the target. A further complication: a ridge of sulphur rock completely hid the target from the southern unit, which was in greatest danger from the strike.

After a period of maneuvering and arranging which tried everyone's patience, the rocket planes struck, with the observing air liaison officer adjusting range on the first rockets fired. The strike went on.

From the air came the word: "All rockets expended. Bombing runs on the way."

From the ground came comment: "Rockets and first bombs on target—keep it up."

The aircraft rendezvoused, nosed over, dropped, pulled out, rendezvoused and nosed over again. The strike worked on Hill 362 for 25 minutes.

After the last plane had spent its last round, the word came up from the ground:

"Attack right on target. Results excellent. Can we have more?"

Another group continued the attack. As the last plane pulled away, the ground observer reported, "From here it looks as though you had removed the hill."

Hill 362 was seized by marine infantry next day in a pre-dawn attack. As can be imagined, the report on the hill's obliteration was sanguine; the marines found lots of opposition. But an on-the-spot survey of the strong point showed 60 per cent of the emplacements had been destroyed prior to the assault, including the field piece behind the steel doors. Considering the amount of HE laid on that target, air can't claim its reduction, but air claims much of the credit.

There were other strikes as effective as that on Hill 362, several involving a precision and accuracy not usually associated with targets so difficult to spot.

Early in the campaign, plane rockets holed and then destroyed a pillbox masked from both artillery and naval rifles. The planes struck less than 150 yards from friendly troops.

And during the final attack on the pocket in the northern tip—a last-stand position—12 fighter-bombers registered direct hits on a blockhouse and four caves. Results: the blockhouse destroyed and the four caves "folded over."

For nearly a week, a strong point of caves, pill-boxes, and gun emplacements held out against the right center of the Fourth Division. To the air co-ordinators, the Marine Landing Force Air Support Control Unit, to the artillery, and to shore fire control people, it was a familiar enemy. One air co-ordinator during his briefing exclaimed:

"Do I know the spot? Man! I've been making



Hold 'em by the nose while you kick 'em in the pants. Patton's tank formula works with planes at Eniwetok. Smoke-hidden marines pin down Nips as fighters strafe 'em.

low passes over that place for the last four days!"

The morning following the day the Third Division had patrols pushed through to the beach—and and sent back the famous canteen of salt water marked "for inspection, not for consumption"—Fourth Division units called for as much air as could be put on this strongpoint.

Dummy runs reassured commanders of ground units less than 200 yards from the target. Mortars put down smoke to spot the target, but the Japs promptly released white phosphorus all over the landscape. Air liaison warned the control unit and planes against the false markers, however, and the artillery re-marked the point with colored smoke shells. Then the control unit and the air coordinator sent in the strike with rockets and 100- and 500-lb bombs. From both air and the ground came the word "right on the nose."

The request was repeated, and a new strike group could not get squared away, so it was pulled out and sent against a target where the margin of safety was greater. Then, a third strike group checked in, made dummy runs, got clearance and attacked. This group drew a "well done" from the ground.

Line commanders wanted still more planes on this target, so, later in the day, another strike group bore in. All its bombs and rockets were "right on." A ground FO saw a field piece blown several hundred feet into the air, and the air coordinator on a different pass reported a big sheet of metal "like a cover" flung skyward by the bomb blast.

As these positions had been pounded by every naval and land weapon available since D—3, any statement as to "who did what?" would be impossible to substantiate. At any rate, when the Fourth made its final push through these positions to the beach, resistance was slight.

These and similar attacks on Iwo showed the close support plane to be, within its limitations, a highly effective weapon in the assault business.

I WO was a combat milestone in the technique and practice of air support. Tactics and techniques which were experimental there will soon be SOP. It is probable, for example, that there will be a wider use of colored artillery smoke. A set-up has been worked out whereby the air observer can adjust for the strike planes on targets where no other observation is possible. And strike planes will be loaded with hardware appropriate to the targets. Technical improvements and innovations in equipment and ordnance will be seen.

Organization and training have improved. Carrier-based marine squadrons, extensively trained (many of them over live targets) in ground attack and close support, will go into future operations as troop support specialists. Without any intent to detract from the fine close support flown by carrier-based navy pilots, specialist marine pilots whose

sole concern is troop support will help immeasurably.

Training of pilots in ground attack and close support of infantry is a key point. The fighter pilot must re-orient his ideas as well as his tactics. His mission has been changed. No longer are his prime concerns Jap aircraft, bomber-protection, or strafing sweeps. Effective ground attack, if it is to deal with the variety of targets which confront it, employs as numerous and as complex tactics as air combat. As the pilot's concern is the ground target, so, to some extent, his problems are those of the ground troops.

The "live" training grounds of the bypassed Jap atolls in the Marshalls have turned out pilots skilled in ground attack and have spawned new twists in fighter bomber tactics and loading. An extensive marine carrier program is turning out pilots thoroughly trained for close support.

A third training element aims at filling a variety of key jobs in the close support set-up. The Air Infantry School at Quantico is pupiled by field commissioned ground officers and combat-experienced marine pilots. For the length of the term the flyers have put aside their wings and have joined the "gravel crunchers"—the infantry. Night attacks and landings, "the company in the attack and the defense," "terrain appreciation" and other Perry Farm familiars give them a first-hand acquaintance with the ground troops' view of warfare. Pilot graduates of this school have a mixed destiny. They may become air liaison officers with ground units. enter carrier squadrons as flight leaders and air coordinators, or take over control of nets in a landing force air support control unit.

The ground side of the picture is not neglected. The performance of air liaison officers at Iwo was generally good, but there was, in some instances, a marked difference in individual performances.

Although the first close-support missions were flown on Guadalcanal, and others at Bougainville and Attu, it was at Tarawa that close support, as it is now known, was first tried in the central Pacific. A team of one officer (trained for the work) and six enlisted men were attached to each battalion, one to each regiment, and one to a division. They were equipped with a pack radio, and had, in addition, a radio jeep. The higher echelon teams carried more elaborate radio gear. Lines of communication ran back to the Air Support Command Unit, shipborne, and manned by naval officers. This unit was the control nucleus and maintained voice contact with both the air liaison parties and the planes over a series of radio nets. In three days 650 close-support sorties were flown with excellent results.

The assaults in the Marshalls needed little help from the air. The advent of the Amphibious Flag-

(Continued on page 56)

Old Glory On Shuri By MajGen Pedro A. del Valle

Reduction of the enemy's broad defensive belt centered on Shuri was described as Cave Warfare in my July article for the GAZETTE. Ridge by ridge and draw by draw the Japanese defenses were taken, not without heavy loss. The Blue lines were up against the core of the defenses in the center, where the First Marine Division, with the 77th Division on its left, was straining to break through the gap in rugged hills in the northern part of the town. On the flanks the enemy still fought hard, but, after capture of Conical Hill, which was the key to the eastern flank, by elements of the 96th, the Seventh Division, fresh from Army reserve, broke through and romped southward, eastward, and eventually westward to threaten Shuri from flank and rear. On the enemy's west flank, the Sixth Marine Division, grinding on through Naha, threatened an envelopment.

Taking advantage of a two-week rain, which had our tanks bogged down and useless, our roads of supply impassable, and both ground and air observation at a disadvantage, the enemy began to withdraw from Shuri. Elements of the First Marine Division on the front lines noticed things moving and reported what they thought were Jap demolition parties, blowing up their own caves. The reports were shortly confirmed by both ground and air spotters, who went up upon getting our reports on the afternoon of 26 May. Ships, land artillery, and planes poured deadly fires into the enemy's retreating columns and an estimated 1000 Japs were killed.

To assist the Sixth Division's effort, the corps had added about 1000 yards of front to the First Marine Division to the westward. This proved to be a very valuable piece of real estate for the 1st MarDiv, as Fifth Marines patrols began using the railroad bed to push on toward Asato village, at the west end of Shuri Ridge itself. Eastward from the village was a formidable defense guarding the approaches to the ridge. We named it Beehive Hill because of its honeycomb shape and its several layers of caves dug for all-around defense. After a few days of pounding with gunfire and air our patrols were able to reach the Beehive, and on the afternoon of 28 May the 1st Bn, Fifth Marines, under LtCol Shelburne, seized and held this important bastion with little effort. Pushing on to Shuri Ridge itself early next morning, this unit soon reported the capture of a gutted barracks and radio station. Meantime, for two days the First Marines in conjunction with the 77th Divix sion had made many gallant assaults to seize the rugged ground just north of Shuri, maintaining a terrific pressure upon the Japs, and greatly assisting the swift flanking movement of the Fifth Marines on our right. The CO, 1st Bn, Fifth Marines, having got a foothold on the Shuri Ridge, found himself confronting the frowning fortress of Shuri Castle itself. This bastion commanded his precarious hold upon the ridge. He asked the division commander for permission to storm the place, and, although this was in the Zone of Action of the 77th Division, permission was given immediately in view of the great danger of enemy action from the castle. At that time the position of the 77th Division was such that it would have taken several hard days' fighting through enemy resistance before they could reach it.

Capt Dusenbury, commanding A Company, 1st Bn, Fifth Marines, made the assault with his company, surprising the relatively small garrison so completely that the place fell with ridiculously small loss to ourselves. Shuri Castle, the core and strongest bastion of the Shuri defenses, was ours! It was unbelievable. Fighting without tank assistance, through mud that was knee deep in the bottoms, we had taken Shuri Castle by assault! The elation of the troops was stratospheric.

The division commander immediately ordered the First Marines to push two battalions into the ridge by way of the Zone of Action of the Fifth Marines, thus avoiding the heavy fires still coming from the Wana Draw. From the commanding ground of Shuri Castle it was possible to attack the Wana Draw position from flank and rear, and to clean the remaining enemy out of Shuri itself. Meantime the Fifth Marines were ordered to continue to push patrols to the South and East. This they did as soon as the elements of the First Marines took over Shuri. Resistance was met from minor enemy forces who were, however, well dug in and occupying commanding positions on the high ground south of Shuri. The next day, elements of the 1st MarDiv met troops of the 96th Division, which had pinched out the 77th and had seized Hill 125, a peak just southeast of the Castle. This completed the encirclement of the Shuri.

The Commanding General, 1st MarDiv, sent the flag which the division had raised at Cape Gloucester and on Pelelieu to Shuri Castle, where LtCol Ross, of the First Marines then occupying it, raised it on a piece of the fortress flagpole. The Jap, firing from nearby positions, must have felt his heart sink as Old Glory proudly waved from his former fortress, head-quarters of the Jap's THIRTY-SECOND ARMY.

Handy Antitankers The Jap's unorthodox use of tanks

calls for unorthodox treatment. An antitank outfit fights in sand, city and country, just By Mai I. N. Kelly about the way it did in the jungle-with more opportunities.

Author's Note: This article is based on an evaluation of observations made in a series of combat operations. The first, at Guadalcanal, British Solomon Islands, was a representative example of jungle warfare. The second, at Tarawa, Gilbert Islands, was representative of an atoll operation. The third and fourth on Saipan and Tinian, Marianas Islands, combined the predominant features of jungle, atoll, and open country warfare.

T MAY be stated generally that the plans of employment for all ployment for 37-mm and self propelled 75-mm half-track or 105-mm full-tracked guns as antitankers remain standard regardless of terrain or type of operation. Enemy tank forces may be anticipated as readily on an atoll or in the jungle as in large open areas. The Japanese may be expected to demonstrate unusual and unorthodox tank tactics and to have tanks disposed in all conceivable places.

In any operation, therefore, the weapons company officer must be prepared to anticipate the antitank functions of his weapons. In this respect there is little difference to date between the operations. It is true, of course, that certain types of terrain and their strategical location within the Japanese perimeter of defense may lend themselves better to enemy tank operations. In such cases, more emphasis will be placed on antitank preparations than might otherwise be done. But, in any case, it should be remembered that enemy tanks may be encountered anywhere, in any type of terrain.

The 37-mm gun as an antitank or antipersonnel weapon has proved its worth against the enemy in the Pacific. This fact gives the 37-mm a primary function which the weapons company officer must be trained to exploit. He must anticipate landing his guns by hand early in the operation. The weapons company may be expected to give antitank protection to the flank of the beach or to cover other likely tank approaches to the beachhead line.

The weapons company officer must be familiar with the many problems of ship to shore movement which he will encounter. He must be trained to make rapid, yet accurate, reconnaissance in order that the guns may be deployed to the best advantage. This may be to deploy in depth if the situation warrants, or to be placed in line with the infantry—depending entirely upon the factors which

determine the tactical situation. If the line of infantry is advancing, the weapons company officer must be prepared to move with it, to cover its movement, or to do both. At the same time, he maintains a continuous reconnaissance so that he is prepared to provide adequate antitank protection when the infantry elements have reached their objective.

When enemy mechanized activity is not anticipated the 37-mm gun can function as an infantry support weapon. Its primary ammunition becomes cannister and it must be employed to exploit the properties of cannister to the best advantage. This necessitates placing the guns in position on line with the infantry so as to provide protection against enemy infantry. It is often impossible to advance the guns without prime movers with the same speed reached by the infantry. It is essential, therefore, that contact be maintained with the infantry unit concerned. Preparations should be made to move the guns readily into line under the cover of dark-

It is the weapons company officer's responsibility to see that his fire is properly coordinated with that of the infantry and that the most complete protection is afforded. It may be necessary to divide the guns into sections to accomplish this, but the command should never be divided. (Note-The T/O calls one gun a section, but in this instance two guns are considered one section.)

In addition to night defense, it may be advisable to use the 37-mm for preparatory barrage purposes prior to any movement of the line. The terrain may even offer an opportunity to afford overhead fire support on targets such as machine-gun nests,

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Don't forget the Jap will convert a wrecked tank into an armored machine-gun position.



Not only tanks but holed-in Japs are prey for the highly mobile half-track's 75. Here, used as assault artillery, two antitank guns knock out a pillbox on Iwo.

caves, and so on, as the infantry elements advance. In short, if used properly, the 37-mm gun will prove itself particularly useful and a reliable contribution to the infantry effort.

Self-propelled artillery, half or full-tracked, has a dual purpose and use in the Pacific Theater. Because of its peculiar characteristics—mobility of the carriage and flat trajectory of the piece—it is commonly employed not only as an antitank weapon but as assault artillery as well. When the enemy is known or reasonably supposed to be armed with tanks, however, the primary concern of the platoon becomes the successful engagement of those tanks. It is the responsibility then of the platoon, combined with other arms, to deny the entire regimental front to the enemy.

Bearing in mind that the self propelled gun remains the only Marine Infantry Regiment antitank weapon with a high degree of mobility, it should be deployed tactically so as to render immediate support to any part or all of the regimental line. It becomes the responsibility of the weapons officer to dispose his weapons to accomplish this in the most effective manner.

To do this successfully, the weapons officer must be thoroughly familiar with the entire regimental tactical situation. He must make a continuous careful study of all maps and intelligence data showing our own and enemy disposition. He must make a careful personal reconnaissance with that part or all of the regimental line within his zone of responsibility. To reconnoiter effectively, it follows that he must have been well grounded in terrain appreciation as it is applicable to defense against mechanized attack.

THE weapons officer must make note of all probable and possible approaches for enemy mechanized units. He must consider the best positions, primary and secondary, for him to meet such an

attack. He must weld movement and fire together. He must further consider all available routes of approach to those positions, bearing in mind that he might have to move into position under fire or during darkness, or both.

All infantry unit leaders within his zone of responsibility must be contacted; this has reference to company commanders particularly and also to platoon leaders whenever it is possible. Consideration must be given as to such antitank weapons as are already in position and probable dispositions must be coordinated to insure the most effective defense of the area. Such information and plans should be submitted to the infantry unit leaders for their information. It is highly important that the fullest cooperation between infantry units and their supporting arms be achieved.

The weapons officer should select an assembly area that will place his weapons in the best position to prosecute his plans by defense, of course. In selecting such a position, he makes provision for all possible cover and concealment, occupying defiladed positions with an adequate amount of foliage wherever possible. He must also consider possible observation by the enemy and select covered routes of approach. He must arrange for communication with the infantry unit he is directly supporting. For example, if his zone of responsibility coincides with a battalion front, he will normally be attached temporarily to that battalion and consequently must have instant means of communication with it. He must be able to keep abreast of the tactical situation and start immediately for any of his previously selected positions. With all this accomplished, it is the weapons officer's next responsibility to attempt to anticipate any movement of enemy mechanized forces, and to plan his movement to meet them.

His men, particularly the gun commanders,

(Continued on page 55)

Super High Arty Firing Table Marines

get tested data on reduced increments. They make LtCol Hughes' idea applicable to 105s in close support on high-masked targets only 1500 yards away.

By Maj Ivan L. Smith

Early experiments on super high angle fire by LtCol Thomas B. Hughes were described by him in the December 1944 GAZETTE. In these tests, LtCol Hughes tried shortening ranges by reduced charges that cut down muzzle velocity. This idea, developed and reduced to tables, makes it possible to support troops at ranges down to 1500 yards when high masks preclude ordinary fire.

In the early phases of an amphibious operation, direct support artillery frequently lands before the beachhead is much more than a slender fringe, and it must have relatively low masks to render the close and continuous support the infantry so direly needs. Because of high masks, support with 105-mm howitzers employing normal low- and high-angle fire is often impossible when ranges to front-line troops are 2800 yards and less. When the beachhead is small, artillery positions are necessarily scarce and confined; on many occasions, the beach itself has been the initial position.

Jungle or island war veterans know that trees are not unusually tall at 100 feet, and that the distance from guns to trees must be considerable for low-angle short range support. Such positions are rarely available. When high masks preclude low-angle fire, the recourse has been to try high-angle fire with suitable charges. As the minimum range for normal high-angle fire is 2800 yards, troops could expect no close support if front lines were nearer.

Many times the infantryman's outlook would have brightened and his commander's worries lessened had there been some way to deliver high-angle fires at less than 2800 yards. At Guadalcanal, Gloucester, Saipan and Tinian, Guam, Pelelieu and Iwo Jima, such fires would have been welcome.

At Guam, it was necessary for direct support battalions to land and set up in a Zone of Action different from that of the unit they supported. The short-range dilemma was the reason for this maneuver. By landing at the opposite extremity of the beachhead, the direct support battalion could fire in the zone of the units it was supporting. Wire was necessarily parallel to and running the length of the beach, and the effect of tracked vehicles on wire needs no comment. Such a tactical disposition is confusing. In this situation, unless the organiza-

tion for combat was changed when the beachhead began to expand, the displacement of the supporting artillery battalions in opposite directions and their passing through each other would create a traffic snarl and consequent delays. To change the organization for combat at such a critical time would be most hazardous. A high-angle, close-range type of fire in this case would have shortened the lines of communication, simplified tactical dispositions, and eliminated the necessity of reorganizing for combat when displacement became necessary.

Artillery has been ineffective in many attempts to fire on reverse slopes of high ridges and hills. It has often found itself unable to fire behind such hills and ridges because terrain and the lack of suitable position areas forced them to positions either too far from or too near the front. Here again, high-angle fires at close ranges would have helped support foot troops.

The limiting factors which have influenced artillery employment in landing operations have been generally:

- 1. High masks.
- 2. Scarce position areas.
- 3. Shallow beachheads.
- 4. Ammunition supply.

The artillery has solved the fourth problem, but the first three require a different approach. It is the purpose here to present a partial solution. Some of the early attempts at solving these problems furnish background information.

In the Fall of 1943, LtCol T. B. Hughes, First Division, conducted an experiment with what was called "super high-angle fire." He extended the high-angle of the 105-mm howitzer beyond the limits of the standard firing tables, beginning at an angle of elevation of 1171 mils and increasing elevation up to 1342 mils to fire at ranges down to 1800 yards. (See Figure I.)

Test firing proved that at elevations greater than 1342 mils, projectiles tended to tumble. (Instead of making the turn at maximum ordinate, the projectile fell off.) LtCol Hughes called this "the point of discontinuous drift."

Although super high-angle reduced the range from 2800 yards to 1800 yards, there were difficulties. It required a great deal of preparation of position; it was a slow and difficult process to service the piece; and instability in flight was possible at extreme elevations. Apparently there has been no use of super high-angle fire in combat.

Following the super high-angle tests, LtCol Hughes came up with an idea of greater value. Rea-

TABLE OF MAXIMUM ORDINATES, Ys, IN FEET

Charge	Range yards	Y	Range yards	Ys	Range yards	Y 8	Range yards	Y
1	500	20	2000	397	3500	1702	3000	4818
	1000	90	2500	669	3825	2918	2500	5231
	1500	213	3000	1066	3500	4157	2000	5496
	2000	397	3500	1702	3000	4818	1800	5550

1	2	3	4	5	6	7	8	9	10	11	12	13
Range Elevation		Fork	Change in elevation for 100 yd change in range	Change in range for 1 mil change in elevation	Time of flight	Probable error				1	Deflection effect	
	Elevation					Range	Deflection	Height of burst	Slope of fall	Line number of metro message	Drift*	Lateral wind of 1 MPH (+)
R	EL	F	C	mil	Time	e pr	e pd	1	Slope	L	Dft	W-D
yd	mil	mil	mil	yd	sec	yd	yd	mil	1/	No	mil	mil
3000	1129.2	23	22.2	5	35.2	26	4		0.44	5	52	0.7
2900 2800 2700 2600	1150.8 1171.4 1191.2 1210.2	$\begin{bmatrix} 21 \\ 20 \\ 18 \\ 16 \end{bmatrix}$	21.0 20.0 19.2 18.6	5 5 5 5	35.6 36.0 36.4 36.8	26 25 23 22	4 4 4 4		$0.41 \\ 0.39 \\ 0.37 \\ 0.35$	5 5 5 5	55 58 61 63	0.7 0.8 0.8 0.9
2500	1228.4	15	18.0	6	37.1	21	4		0.34	5	65	0.9
$\begin{array}{c c} 2400 \\ 2300 \\ 2200 \\ 2100 \end{array}$	$\begin{array}{c c} 1246.0 \\ 1263.0 \\ 1279.6 \\ 1295.8 \end{array}$	13 11 10 10	17.4 16.8 16.4 16.0	6 6 6 6	37.5 37.8 38.1 38.4	19 17 16 15	3 3 3 3 3 3		0.32 0.30 0.29 0.27	5 5 5 5	68 70 72 73	1.0 1.1 1.2 1.3
2000	1311.6	9	15.6	6	38.8	14	3	1	0.26	5	74	1.4
1900 1800	1327.0 1342.0	8	15.2 14.8	7 7	39.1 39.4	13 13	3 3		0.24	5 5	74 74	1.5 1.7

*The Drift of the H.E. Shell M1 for angles of elevation above 1150 mils is extremely sensitive to external meteorological conditions. Values of drift listed in the firing tables therefore will not always agree with results obtained in firings.

When firing at elevations near 1333 mils, large left drifts may be expected under certain rear wind conditions.

14	15	16	17	18	19	20	21	22	23	1
Complemen	ntary angle for each		Range eff	ect of incres	se of—				r.	1
+1 mil of site	-1 mil of site	One in wt of proj c is std	One foot per sec in MV	Air temp 1 deg Std is 59° F	Rear wind of 1 MPH	One pct in air density	Fuze setting for graze burst	Displacement of burst		Range
mil		Wt	VE	Temp	W·R	Den	FS	Ht	R	R
	mil	.yd	yd	yd	yd	yd	sec	mil	yd	yd
-1.34	+1.24	-27	+8.1	1	+2.6	-4				3000
-1.31 -1.28 -1.24 -1.20	+1.20 +1.16 +1.13 +1.11	-26 -25 -24 -23	+7.9 +7.6 +7.3 +7.0	negligible	+2.6 +2.7 +2.7 +2.7	-4 -4 -4 -4				2900 2800 2700 2600
-1.17	+1.10	-22	+6.7	is	+2.7	4				2500
-1.14 -1.12 -1.10 -1.09	+1.10 +1.10 +1.09 +1.09	$ \begin{array}{r} -21 \\ -20 \\ -19 \\ -18 \end{array} $	+6.4 +6.2 +5.9 +5.6	Temperature effect is	+2.7 +2.7 +2.6 +2.6	-3 -3 -3 -3				2400 2300 2200 2100
-1.08	+1.08	-17	+5.4	jer.	+2.5	-3				2000
-1.07 -1.06	$^{+1.07}_{+1.06}$	$-16 \\ -15$	+5.1 +4.8	Temp	+2.5 +2.4	—3 —3				1900

Figure 1

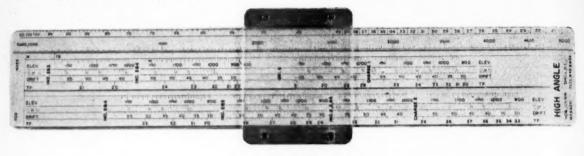


Figure II

A new GFT for reduced-charge high-angle fire has been drawn up in which increments 2 and 3, and 2 and 4 have been removed because of the relatively frequent sticking of projectiles in the forcing cone. Other modifications were incorporated.

soning that high-angle ranges could be reduced by a reduction in muzzle velocity, he calculated a firing table for increment 6 only. By employing this propellant alone, it was estimated that muzzle velocity could be reduced from 650 f/s (Charge I) to about 570 f/s. He then instituted identical experiments in two areas. Last February, the 11th Marines, First Division, conducted a test in the Pacific and the Field Artillery School, Marine Corps Schools, did likewise at Quantico. The experiments were successful and stable flight at elevations up to 1170 mils was obtained. With an elevation of 1170 mils, the minimum range obtainable was 2200 yards.

At about the time of these experiments, Army Ordnance, at the request of Fort Sill, calculated firing data for several increments and combinations of increments which would further decrease muzzle velocities. Employing these calculations, LtCol Burns, FA, Fort Sill, drew up a graphical firing table (GFT) for reduced-charge high-angle fire. (See Figure II.)

The data as calculated very closely approximated the results of the experimental firing of increment 6. (It averaged approximately the results of the tests.)

When the GFT for reduced charges was made available by Fort Sill, it was test-fired by the Field Artillery School at Quantico with very good results. The findings:

1. The first rounds fired with reduced charges in a cold tube were erratic; initial rounds were approximately 100 yards long in range. After about 10 rounds, the dispersion pattern became normal.

2. When the tube became "conditioned," range dispersion for any of the increment combinations fired did not exceed 150 yards.

3. K transfer data was sufficiently accurate to employ massed battalion fires. Registration cor-

rections obtained with one combination of increments were sufficiently usable with other combinations of increments when targets within transfer limits were attacked. The tests indicated that as in normal high-angle fire, its use should be limited to observed fires.

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4. Ninety-four per cent of the fuzes (M48, S.Q.) functioned normally; 6 per cent resulted in duds.

5. Two projectiles stuck in the forcing cone when increments 3 and 4 and 2 and 4 were fired. In this case the gun was cold; after the tube was conditioned with four rounds at a higher charge, no further sticking occurred in that tube with either of the two combinations.

6. Inadequate gas pressures developed when increments 2 and 3 were used. Even after the tube was conditioned with other higher combinations of increments, all rounds fired with increments 2 and 3 resulted in stuck projectiles.

7. It was found that projectiles which fail to pass the forcing cone because of inadequate pressures can be safely blown clear of the tube by employing another shell case with a propellant which gives greater pressures than do increments 3 and 4.

As a result, all marine 105-mm howitzer battalions in the field will be issued the "Reduced-Charge, High-Angle Graphical Firing Table." It is now possible to render effective support at ranges down to 1500 yards when normal fires are precluded because of high masks. This is an added flexibility to the already versatile 105-mm howitzer, and it is expected to make Japs very unhappy.

High-angle reduced-charge firing has limitations, but commanders in the field should consider this idea in their planning and use it when they confront the short-range high-mask problem . . . and they will confront it.

How to Win a War-Soviet Style

German shells whistled over Leningrad. The city was under attack from three sides, with the mechanized Huns less than 10 miles away.

Into the Leningrad Department of Military Car-

tography came officer couriers bearing secret orders from the Supreme Soviet Command:

The orders were to prepare maps for an attack on Berlin—made more than three years later.

Landing Team Sergeant Major

Things will be a lot different from good old Quantico when you hit the beach. Phones will go out, typewriters will be scarce and supplies will be late.

By SgtMaj H. Lyon

DURING an amphibious operation, the sergeant major of a landing team will find his job divided into three distinct phases—preparatory, shipboard, and combat.

The first, or preparatory, begins upon receipt of orders for embarkation and ends when the unit is fully embarked, combat loaded. During this period, the sergeant major is concerned chiefly with the preparation of embarkation rosters for his own unit, and in obtaining embarkation rosters from the component elements of the landing team. Great care must be exercised to keep these rosters 100 per cent correct. By conferring with administrative personnel of units of the landing team, uniformity in preparation of rosters may be effected, with considerable saving in time, materials, and effort.

Due to the large number of copies required, it is best to mimeograph embarkation rosters. The importance of accuracy in every detail may be clearly realized when all the uses of the so-called "embarkation rosters" are understood. Remember. after the landing team is finally embarked, these rosters constitute the only complete personnel record that you will have available for the attached units of your landing team. It will be necessary to refer to your office copy for full name, rank, serial number, SSN, and service component in any case involving persons outside of your own battalion. There will be many such cases, particularly if the period aboard ship is a lengthy one involving matters of discipline, correspondence, and miscellaneous maters. As Commanding Officer of Troops, the LT CO is authorized to convene summary courts martial and deck courts to try any enlisted person.

It is well to delay preparation of rosters until the last possible moment. Changes due to sickness, accidents, and so on, will occur right up to sailing time. Experience has shown that 48 hours prior to embarkation allows sufficient margin and is close enough to include most of the last minute changes. There will be, of course, deletions due to hospitalization, AWOLs, and the like, but these can be kept to a minimum.

If practicable, the sergeant major should be included on the advance detail that will go aboard at least one day ahead of the main body. He can be of considerable assistance to the officer in charge in making necessary guard, police, and mess details. The ship will furnish the LT CO with several nicely bound copies of Ship's Regulations including guard, police, and mess duty requirements. Seldom, if ever, will actual requirements conform to those presented in the regulations. Therefore the

sergeant major can materially reduce the confusion attendant on the first day by ironing out these discrepancies and having the details made prior to arrival of the troops.

Office equpiment to go forward should include a field desk, two typewriters, and a stout chest for the adjutant's registered publications. The standard Marine Corps safe is not adapted to landing operations. This gear can go aboard with the advance detail and the troop office can be set up and ready to function when the LT arrives aboard.

The second, or shipboard phase, begins with the LT's arrival on board. If you are sailing within a few hours, speed and accuracy in the assembling of rosters for mailing is essential. Officers and noncommissioned officers in charge of details coming aboard will submit one copy of the embarkation roster of their unit corrected to include final deletions and/or additions. Copies so submitted will be compared with advance copies previously received, and sufficient copies for mailing will be immediately corrected and sent ashore. The number of copies required for mailing will vary, but the distribution will approximate the following: 24 copies to the administrative rear echelon; six copies to the port director; and four to eight copies to the ship's office. These copies should be made up in sets and stapled together to facilitate handling. Again, the need for absolute accuracy must be stressed. The same rosters (additional copies) may be used for



Several nicely bound Ship's Regulations.

debarkation in accordance with Article 10-15 Marine Corps Manual.

The first few hours aboard will be trying. No matter how carefully you have planned, there will be adjustments. In the interests of control, you will find it helpful, if not downright imperative, to have the senior NCO of each attached unit report to you twice daily. Details aboard will often consist of as few as three to 10 men and it is these small detachments that never seem to "get the word." It is advisable to group several such small elements together under an NCO for control.

With a little initiative and forethought, you will be able to save the LT CO and the adjutant considerable grief, and at the same time make your own stay aboard more enjoyable. So far as is possible, organize. The landing team is a tactical organization. Administration of routine matters within your own battalion with its smooth-functioning chain of command is one thing but shipboard administration of the heterogeneous landing team is quite another.

It will be necessary and desirable to form administrative groups of two or more of these small units, preferably those living in the same compartments, to furnish the ship's guard and police details. Make arrangements so that each group makes up its own guard lists, police details, and so on, when so scheduled by the troop adjutant. For purposes of identification these groups may be given letter designations, "A," "B," and so on.

A troop police sergeant should be detailed immediately to work under the supervision of the troop police officer. The ship's first lieutenant and his assistants are the housekeepers. Your police sergeant can coordinate with the ship's people with regard to police of heads, passageways, topside sweeping details. If you arrived with the advance detail, you can have the cleaning details made and available to the police sergeant within a couple of hours after the arrival of the troops.

Designate the senior NCO in each compartment as "compartment NCO," then direct him to appoint a police sergeant for the compartment and make up his own cleaning station bill. This will save you much grief and will enable you to put the finger on a responsible person when the gripes start coming in. These factors all add up to the difference between a voyage filled with a continuous stream of irritations, and one of comparative ease.

Change sheets should be prepared to cover the days between port of embarkation and the staging area. Upon arrival at the staging area, mail all pertinent data to the rear echelon. Report any changes in personnel to the next higher echelon at this time.

It is advisable to make change sheets up to D—1, mailing them at the ship's post office. At this time furnish each of your attached units with two or three corrected copies of their rosters to take ashore at the target. One complete set of

rosters should be filed with your office gear. Complete personnel data will be needed after the operation for citations and you will have inquiries to answer, so keep it where it will be safe.

The combat phase begins when you go over the side. It will end some days or weeks later when the island is secured, or when the Army comes ashore to relieve you. During this period, the sergeant major is responsible to the S-1 for three important items of paper work. These are the Unit Journal, the S-1 Report, and last, but by no means least, the casualty reports.

In the writers LT, the senior clerk is charged with keeping the journal, one clerk is detailed to the aid station to record casualties, and one is sent to the regimental CP, where he can occasionally get to a typewriter, and where he can maintain a file of completed journal sheets and casualty reports.

NOW you've hit the beach. Prior to leaving the APA or the LST, you've packed up the field desk, the typewriter chests, and the adjutant's strong box. You won't see that gear for many days, maybe weeks. It will come in with the last loads on D+several, to lie in the rear dump until you get out of the line. So don't plan on being able to get to it for reserve supplies of reports and forms. Carry what you need with you when you leave the ship.

The day prior to debarkation, "combat load" the map and dispatch cases carried by yourself and clerks with identical supplies of Journal sheets, S-1 Unit Reports and Casualty reports. Include in each at least one complete roster of the LT. A small draftsman's triangle is a handy item and easier to pack than a straightedge. The 2-section



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The Marine safe is not adapted to landings.



You'll have to pass the word with runners.

can usually be "made" for at least one-two or more if you're fast on your feet.

The forms and rosters can be partially water-proofed by wrapping them in the heavy cellophane in which new gas masks are packed. This affords a measure of protection against possible immersion in salt water. Thus loaded, you're all set to function as soon as the first CP is set up on the beach. Your foxhole is going to be your office for the next several days and you and your trusty clerks must carry everything you need—jeep rides are few and far between and not to be depended on. So keep it light and compact.

It's been a hard day. Your outfit has fought and scrambled inland a few hundred yards. You haven't looked at your watch and, now, surprisingly, it is 1600. You know that because regiment is howling for the S-1 report. If wire is in, and the situation not too hot, you can check your first sergeants for a report of casualties and front line strength. It probably won't be at this stage of the game. You may be able to use the radio but this is inadvisable for several reasons. There is security to consider, and obviously there will be more important traffic for the overworked circuits. So you'll have to get the dope by runner.

This contingency should be foreseen and the first sergeants instructed to send you the required information at the stated time without further orders. This being the case, and the dope in hand, you compile the report and shoot it back to regiment just under the deadline at 1700.

Casualty reporting in a front line battalion is probably the most difficult task of all. Extreme caution must be exercised and no report should be forwarded until it has been checked and double checked in every detail.

The period of heaviest casualties is, of course,

the period during which communication with the companies is most difficult. While speed in reporting casualties is a desired end, never sacrifice accuracy to attain it. If there is the slightest doubt on any point, check and double check before releasing the report.

The clerk posted with the battalion aid station will see most, but not all, of your wounded. Many will clear through other aid stations and in some cases it will be days before you can obtain the required information to complete the report. During the lulls, send a man to check the aid stations of adjacent battalions. If possible, send another to check the field hospitals in the rear. In this manner you'll get considerable information regarding your wounded, and if you are carrying any missing, it's an even bet that you'll locate some, or all, of these too. Indoctrinate all NCOs in the importance of casualty reporting. Get all the facts you can from witnesses who were on the spot, and get it as early as possible.

In most units, the S-1 report is submitted to cover the 24-hour period from 1500 to 1500. Since the regiment must consolidate the reports of the battalions, it will be necessary that you set an earlier deadline for the companies to report. Instruct the first sergeants in this before you leave the ship. It is well to hold a little school for them covering all phases of your job in the field. It helps them understand the problem and enables them to give intelligent cooperation. Besides, there is nothing in the book that states that the sergeant major is bullet proof, so one of them may have to relieve you.

In keeping the journal, record everything that occurs within sight or hearing. If the information is flowing in, well and good. But be inquisitive and don't hesitate to heckle everyone in the CP for information. The staff officers and the Exec are probably pretty busy with their own worries, so it is up to you to get the "scoop." If a clerk is available, attach him to the S-3 with instructions to log up everything that he sees or hears from that angle. The S-2 keeps a journal too, which will be a help in getting some of the information you want, particularly that which applies to the enemy. The importance of the journal cannot be overemphasized. It's the m. itary history of your battalion, so keep it accurately and well. At the end of the campaign, the CO must depend on it for the preparation of his narrative, and other reports.

When at last the island is secured, or those Army troops get in to relieve you, get that office gear set up and go to work. The rear echelon won't be in for some time and there is plenty to be done. About three months later, everything is squared away—back change sheets and muster rolls brought up to date, several reams of assorted correspondence out of the way, and you begin to quit at three or four in the afternoon—stand by, the cycle is ready to start all over again.



Up the Rock on Iwo the Hard Way

Mt Suribachi was swarming with Japs-till D plus 4.

By LtCol Robert Hugh Williams

COMBAT Team 28 cut rapidly across Iwo Jima, then in four days secured the southern part of the island. It was uphill all the way—the hard

way-in the fight up Suribachi.

D-day, 19 Feb, dawned bright and clear with a moderate sea. A wave of 11 armored amphibian tractors landed at H-hour, 0900, followed closely by LT 128 under LtCol Jackson B. Butterfield, in four waves of amphibian tractors five minutes apart, the first hitting the beach at 0902. Landing Team 227 came in simultaneously on the right, but on his left LtCol Butterfield had an exposed flank. A series of sand terraces prevented the LVTs from advancing more than a few yards inland. The assault platoons of B and C Companies, under Capt Dwayne E. Mears and Capt Phil E. Roach respectively, landed in the second wave [after the LVT(A)s] and proceeded to drive across the island. Only light mortar and small arms fire resisted their approach to the beach, but as soon as the assault platoons reached the second terrace about 50 yards inland, enemy small arms and machine-gun fire increased and casualties mounted.

The remainder of B and C Companies were in the third wave. These two assault companies continued to drive ahead. Most of A Company, under Capt Aaron G. Wilkins, landed in the fourth wave and moved to the south, taking up positions to the rear of B Company's left to protect the open left flank and neutralize enemy fires coming from Suribachi. Enemy fire grew hotter as the last waves of LT 128

landed.

As the assault companies pressed on to high ground in the middle of the island they encountered a strong defensive front of mutually supporting pillboxes and blockhouses which had been little

damaged by naval gunfire or bombing.

At 1035, Lt Wright, 1st Platoon B Company, reached the west beach with four of his men, and Lt Bates, 2d Platoon, C Company, did so shortly afterward with six men. The attack developed in such a way that some elements, a fire team here, a squad or a platoon there, would be held up temporarily until a blockhouse or an emplacement was knocked out while others could move. This seesaw advance caused small groups of men to become separated from their platoons, and prompted an excessive estimate of casualties which was rectified late in the day.

Two 37-mm platoons and the 75-mm half-track platoon of the Regimental Weapons Company landed in the sixth wave at 0922, immediately set up Commanded by Col Harry B. Liversedge, Combat Team 28 landed at H-hour as the left flank element of the V Amphibious Corps, and was joined later that day by Landing Team 328, in 5th-MarDiv Reserve, which landed on Division order.

C Company, 5th Engineer Bn, C Company, 5th Tank Bn. C Company, 5th Medical Bn and a Detachment of the 5th Joint Assault Signal Company were attached to CT 28. The 3d Bn. 13th Marines, a 105-mm howitzer bn, was in direct support but not attached. A platoon of engineers was with each Landing Team but the Tank Company constituted a separate Task Group which landed on CT order and E Company of Landing Team 228 was designated CT Reserve. A 37-mm platoon of the Regimental Weapons Company was attached to each Landing Team and the 75-mm half-track platoon was attached to LT 128. A Section of the 3d Provisional Rocket Detachment to man four trucks mounting 4.5 launchers remained initially under CT control.

near the beach and opened fire on enemy targets towards Suribachi and on the slope of the mountain itself. The 37-mm guns came ashore in weasels.

Landing Team 228, LtCol Chandler W. Johnson, landed in three waves of amphibian tractors beginning at 0935. It moved to the left, and, taking up positions facing Mt Suribachi, relieved A Company in protecting the left flank, gradually extended its right to keep contact with LT 128, and prepared to attack south on CT order. Enemy mortar fire was increasing on the beach.

Col Liversedge landed with his command group with the last wave of LT 228. Meanwhile Landing Team 328 under LtCol Charles E. Shepard, Jr., was released to Combat Team control and landed in three waves of LCVPs at about 1300. It went into

an assembly position 200 yards inland.

Verbal orders were issued for the attack south. All day, naval gunfire, mortars, 37-mm guns, 75-mm half-tracks and machine-guns, as well as artillery when it got ashore, had been used to neutralize enemy fires from the Mt Suribachi area which en-

filaded the advance across the island. LtCol H. T. Waller's 3d Bn, 13th Marines, landed in DUKWs early in the afternoon, set up immediately upon landing and gave stout artillery support. They began firing about 1420. Most of their fire was direct, on very short range. One battery on the beach had to cease firing every few moments to allow engineer dozers to pass in front of the guns to cut a road up the terrace.

THE rocket platoon had trouble as soon as it landed. The one-ton trucks could not negotiate the soft sand and enemy mortars began to concentrate on them. One truck swamped in the surf. Before Lt Bushe could fire a bombardment, two more were temporarily put out of action by mortars. But the fourth and last opened up.

The close support afforded LT 228 by an LCI (G) helped greatly. While the RA line was still a flank rather than a front this little vessel came to within 150 yards of the beach and remained there for hours, pumping 40-mm shells into enemy positions just south of RA.

After noon enemy mortar and machine-gun fire increased on the beach and seriously impeded Landing Team 328, which was moving into position on the right of Landing Team 228. Many men were hit getting out of the boats and moving inland. Companies were pinned down and the time allowed by the book for a battalion to issue orders, make necessary reconnaissances, and move into position after receipt of orders to attack, proved insufficient.

Col Liversedge's order involved a coordinated attack to seize the volcano with the 2d and 3d Landing Teams in assault, the 3d on the right, the front extending across the island. All possible supporting fires and an air strike were brought to bear on enemy positions to the south. Landing Team 128 with E Company, 28th Marines, and C Company, 5th Tank Bn attached, continued to mop up and reduce many emplacements and blockhouses, bypassed in the rapid advance across the island. The hour for the attack south was originally set for 1545, but was delayed one hour.

The short winter day was far spent when the advance began at 1645, and stubborn resistance was encountered. A heavily fortified area extended from what was now our front to the base of Mt Suribachi, 600 yards away. Only negligible gains were made. Orders were shortly issued to dig in for the night.

Just before dark, at about 1800 on D-day, the Combat Team command post moved to temporary night defensive position. Landing Team 128 had suffered the heaviest.

Orders were received from the Division to continue the attack at 0830 on 20 February. Enemy mortar and artillery fire fell intermittently all night. Almost constant illumination by star shells and 60-mm mortars kept down Jap infiltration. At 2315 an enemy barge landed on the west beach in the zone of LT 128, and 39 Japs were killed trying to get ashore.

A heavy air strike, and naval, artillery and rocket preparations preceded the attack on 20 Feb which got off on time, although the tanks which supported both LT 128 and LT 328 were late because the tank maintenance section had not yet come ashore



All but one unit of Bushe's platoon had trouble, but other rocket trucks got ashore and pounded Jap emplacements. They used hit-and-run tactics to dodge counterfire.

and the tank crews had had to fight with their tanks all the preceding day and repair them at night.

Progress was slow. An advance of but from 150 to 200 yards could be made through a maze of blockhouses, pillboxes and emplacements which had to be destroyed with flamethrowers and demolitions, with the help of the tanks. LT 128 continued mopping up along the west beach, killing 73 Japs. Not many dead Japs were found the first two days. The enemy removes his dead when possible. However, when our lines reached the base of the volcano and the enemy became more active with night infiltration, hundreds of bodies had to be buried and many more were sealed in caves and underground chambers. In one cave alone there were 69 dead Japs, most of whom had apparently been carried there after having been badly wounded. Marine casualties for the day were moderate. Mortar and artillery fire continued to fall on our positions throughout the night.

Orders were received to continue the attack at 0825 the next day. The front of LT 328 was too extended, so Col Liversedge again committed LT 128 on the right of LT 328, assigning it a single company front. A 40-plane strike, using bombs, rockets and strafing, preceded King-hour. This strike was brought within 100 yards of our assault platoons. Naval gunfire and artillery also did their part. All units began the attack on time, but little progress was made until the tanks could be brought up. Toward 1100, real progress was being made. all companies and all platoons of Landing Teams 228 and 328 were committed and we were well into the main defenses of Mt Suribachi. By 1400, after repulsing local counterattacks to the front, LT 128 and LT 328 were close to the base of the mountain and LT 228 was advancing elements of two companies around the base of the mountain on a ledge 50 or 60 feet above the water while a platoon of D Company moved along the water's edge.

ON D+3, air strikes, naval gunfire and artillery could no longer be used. The visibility was poor and in the afternoon a cold pouring rain thoroughly drenched all hands. LT 228 sent a strong combat patrol around to the southern tip of the island and LT 328 did the same around the other side, but friendly fire prevented them from making contact at the southern end. Neither patrol met serious resistance. A bad pocket in a depression, about 150 yards across, lay between LT 328 and the

mountain. Tanks, flamethrowers and demolition teams worked on it all day. All companies spent much of the day in destroying bypassed emplacements and pillboxes.

On D+4, after a cold, wet night, operations were resumed. The weather was fine. Col Liversedge had ordered LT 228 to secure and occupy the crest of the volcano and send a strong combat patrol around the base to make contact with LT 128. LT 128 was ordered to attack around the base in its Zone of Action. It was impossible to scale the mountain on that side. LT 328 was ordered to continue mopping up the pocket at the base of the mountain and support the advance of the other landing team. The morning was quiet. It was apparent that we were going to encounter little organized resistance. A four-man patrol went halfway up the mountain and reported no resistance. A 40-man patrol led by 1stLt H. G. Schrier of E Company then started up the mountain in single file, followed after an interval of about 40 minutes by most of F Company led by Capt Arthur H. Navlor, Jr. Some resistance was encountered around the rim of the volcano. Several Japs were killed, then at 1020 the American flag was raised above the northeast rim of the crater by members of Lt Schrier's patrol. The word quickly spread to every officer and man on Iwo Jima and all the ships. Within a few minutes, a hundred thousand pairs of eyes looked toward Mt Suribachi to see Old Glory fly for the first time over territory which had been a part of the inner defenses of the Japanese Empire. At 1130 elements of LT 728 and LT 228 met at the southern tip of the island. Casualties for the day were light.

As for the enemy, 590 dead were counted by our burial parties and a conservatively estimated 815 were sealed in caves. Altogether the engineers sealed 180 caves and cave entrances in the Suribachi area, and infantry assault squads and demolition teams destroyed over 200 installations including blockhouses, pillboxes and covered emplacements.

That night, LT 128 and LT 228 extended their lines around Suribachi's base so that it was completely encircled. We anticipated infiltration from the enemy remaining in the tunnels and caves which honeycombed the lower part of the mountain, and the following morning 122 additional enemy dead were counted in front of and within our lines. Mopping up continued several days, but the capture of the formidable lava mass had been accomplished.

Captured Jap Docs Go Back to Work

Twenty-eight Japanese doctors and corpsmen have left the Prisoner of War stockade on Guam for Okinawa to help U. S. Naval doctors treat more than 150,000 civilian internees rounded up there.

These Japs volunteered to go even as far as the Japanese mainland. Their interest, they said, was based purely upon their profession—the saving of life. The medical men are reservists, draftees.



Marines' F7F Tigercat: The most powerful fighter and fighter-bomber in action today. At sea level, this twin-engine Grumman is faster than any plane the Jap has to meet it.

Tigercat Lightning marine fighter outspeeds a Hellcat or Corsair, and totes more bombs than a B-25.

B AD news for Japs is the F7F Tigercat. Navy security has wisely played very close to the vest on figures of the new ship's performance. But what statistics have been released point to a fast, powerful, versatile plane.

The F7F comes in two models—a two-place plane slated for night-fighter work, and a single-place day fighter that among other abilities can lug 4000 pounds of bombs. It has an announced capacity of twice the average load carried by a B-25, a medium bomber. The Tigercat is hung with rocket racks, and if needed, can carry a torpedo. There are no available details on its firepower, except that it has more than either the F4U Corsair or the F6F Hellcat.

For a power plant, it has wing-mounted double Pratt Whitney Wasp engines, model 2800 C, that develop a total of 4200 hp, twice that of a Hellcat. The rated power can be stepped up by use of water injection. Figures on speed are confined to the statement that at critical altitude, the F7F is in the 425 mph class. It climbs at better than 5000 feet a minute. With a 300-gallon drop tank, it outranges either of the current Navy and Marine fighters.

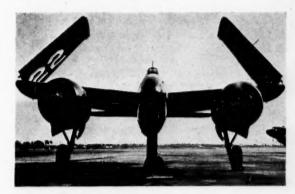
On and off the strip, it has steady characteristics. Stalling speed of between 80 and 90 mph is surprisingly low. Tricycle landing gear (this is the first fighter in Navy history with such underpin-

ning) makes for easy handling on the deck and reduces ground loops.

The Tigercat is ruggedly built and very clean of design. The nose tapers markedly forward of the cockpit which gives the pilot better visibility than is possible in any single engine ship.

In spite of its size, pilots say it is very maneuverable, and handles easily. From the word that has been passed around, and backed by officially announced performance, the presence of the F7F in future operations will make itself felt. Combining the qualities of both the day and night fighter to a greater degree than any other operational aircraft, it is also superbly equipped for ground attack, either of a strategic nature or in close support.

The Tigercat, which marines will have a chance to use, will team up nicely with the new model Chance Vought Corsair F4U-4 which made its bow in combat recently. The latter is a faster version of its predecessors which scored at Okinawa.



The first Navy fighter with tricycle landing gear handles well on deck, and lands easy.

World MPs-Post-War San Francisco Conference

agreements make it look as though one-third of the United States peacetime forces will be earmarked for duty in a United Nations military set-up. By John C. Metcalfe

HE American marine, sailor and soldier will remain under his own flag when he joins the world police force proposed under the United Nations charter at San Francisco.

The peace charter, which carries with it approval of delegations from 50 United Nations, will not become effective until it is ratified by two-thirds of the governments, including the United States, Great Britain. Russia, China, and France.

While every effort is being made to secure the necessary ratifications as soon as possible, it may be two years before suggested enforcement arrangements will begin to function under a military staff

In deliberations at San Francisco, certain agreements of prime interest to the United States armed forces were developed. These were not disclosed, even in broad aspects, until studies of representatives of the various nations were nearly completed. Those who dealt with the military staff committee remained out of the public spotlight.

The conference was essentially a meeting to devise a formula to maintain the peace through moral pressure, employing force only as a last resort. Therefore, little public emphasis was given to the highly important military phases.

Three points, however, now appear to be of paramount interest:

1. Approximately one-third of the peacetime strength of the United States armed forces may be earmarked for supervision by the military staff committee of the world organization.

2. The number of sea, air and land units thus made available, however, will be changed from time to time under a system which will keep the world organization constantly advised on location of these forces and their degree of readiness.

3. The total pool of forces to be made available by all member states to the United Nations organization will probably be bigger than will ever be needed in any one theater or local area to maintain the peace.

To understand the military staff committee, it is necessary to have a clear picture in mind of the principal organs of the United Nations charter. These are a secretariat, security council, general assembly, world court of international justice, and an economic and social council. The duties of these agencies are plain, with exception of the security council, from which the joint military staff takes its direction.

This security council is composed of the Big Five nations and six small and middle powers to be se-

lected on the basis of their contribution to the war and their geographical location. The Big Five have permanent seats, while the little six are elected to serve for a limited period of time.

The Big Five have the power of life and death over the world organization. So long as they remain united, the peace of the world is virtually assured. Once they fall apart, war on a major scale is almost inevitable and the league will die to all practical purposes.

Within these two extreme situations, the Big Five hold a power of unity so strong that few would dare to challenge them with aggression. But they have an individual veto power in the security council which could prevent action against a threat or act of aggression, leaving a dispute to local or regional settlement.

Nevertheless, to meet possible emergencies with the use of force by the great powers, the charter has outlined the following provisions for establishment of the military staff committee:

"There should be established a military staff committee the functions of which should be to advise and assist the security council on all questions relating to the security council's military requirements for the maintenance of international peace and security, to the employment and command of forces placed at its disposal, to the regulation of armament and to possible disarmament.

"It should be responsible under the security council for the strategic direction of any armed forces placed at the disposal of the security council. The committee should be composed of the chiefs of staff of the permanent members of the security council or their representatives.

"Any member of the organization not permanently represented on the committee should be invited by the committee to be associated with it when the efficient discharge of the committee's responsibilities requires that such a state should participate.

"Questions of command of forces should be worked subsequently. The military staff committee, with the authorization of the security council, after consultation with regional agencies, may establish military subcommittees."

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Major aspects of these provisions were discussed recently in a nationwide State Department broadcast by Admiral Arthur J. Hepburn, USN (Retired), and LtGen Stanley D. Embick, both of whom served as advisers to the United States delegation at San Francisco, and who took an active part in shaping the phraseology of the military staff committee section of the charter. Admiral Hepburn is chairman of the Navy Department's General Board, while LtGen Embick is associated with the Joint Strategic Survey Committee of the War Department.

Admiral Hepburn emphasized the point that the world organization will rely largely on moral pressure for its effectiveness, when he said:

"I believe that the very existence of the United Nations military contingents in the background, organized for quick and effective action and backed by evidence of united intent to preserve or restore peace, may prevent disputes from reaching that stage. In other words, if the system really works we may never have to use it."

Several important passages were written into the final charter with respect to enforcement of the peace. One of these was a Canadian proposal which gave the small and middle powers a voice on disposition of troops, if their armies were called upon. Another gave the world police force the right of passage through territories of member nations. A third provision placed the initiative with the security council in negotiating with various nations for military forces.

Organizing military contingents of the United Nations will not be a simple process.

"First, of course, the charter will have to be ratified before the negotiations can even start," Admiral Hepburn pointed out. "Then the various nations will make proposals to the security council, specifying the types and sizes of the national contingents they will stand prepared to place at the disposal of the United Nations. If the proposals seem fair, in relation both to the size of the country's regular armed forces and to what other nations are doing, they would resumably be approved by the security council. Otherwise, the security council might ask for a little more, or, for that matter, a little less here and there."

Best estimates contend this task may take two years, while some think the job cannot be done until two years after ratification of the charter. In any case, the Big Five nations have pledged themselves to act jointly to maintain the peace until the military staff committee is prepared to function.

The exact size of the military staff committee is not defined. It is generally understood that it will be composed of five members, one each from the United States, Great Britain, Soviet Russia, China and France.

Some nations, particularly the small powers, may never be called upon to furnish armed forces, even though an emergency arises near them. All the military staff committee may require in some instances would be use of airfields and naval bases.

All decisions regarding the use of forces, equipment or strategic areas are left in the hands of the military staff committee. For example, the committee would decide if a disturbance in the Balkans would require Chinese troops, when Russian and possibly British and French armies are nearby.

When the military staff committee is formed, it will set about to draft plans to deal with all situations which could reasonably be expected to arise. These plans will be so designed that the world military organization can act with the greatest possible speed, efficiency and secrecy. In other words, the control of military planning and power will rest in as few hands as possible. Naturally, these plans would not envisage aggression by any one of the Big Five.

It is anticipated that as soon as the security council begins to function it will direct the military staff committee to draft a theoretical world plan designed to meet aggression by any single nation or group of nations in any area.

Under this directive, the military staff committee will be told to decide what concentrations of forces may be necessary in any area to meet any foreseeable challenge by an aggressor.

After that will come decisions concerning the respective contribution of forces by the major powers to the world police agency. The nations also are expected to be informed regarding the state of readiness that will be deemed necessary by the military staff committee.

It is also generally understood that the military staff committee will request certain nations to make available for international use a number of naval, air and land bases. These United Nations bases will then be improved with permanent buildings and supplied with adequate munitions and materiel. The bases are expected to be staffed by the troops of the country in which they are situated and may be used by armed forces of other nations only in an emergency. The furnishing of several bases by a small nation may reduce considerably its contribution of air or sea forces. Obviously, this rule would have little effect on the contributions which must be made by the great powers. They will probably be expected to maintain many United Nations bases, even some in areas designated as strategic for their own national defense.

It is highly doubtful that the United Nations forces would hold joint maneuvers. If any are to be staged, they will probably be confined to air and naval forces.

Whether all forces designated for operation under the world police force will wear United Nations insignia is still to be determined. But this much seems certain; members of the air squadrons will wear special uniforms and insignia.

It is doubtful that a permanent commander will be named. More likely is the idea to decide the Command Post on the basis of the geographical location of the trouble center. If the act of aggression, for instance, took place in the Pacific, it would likely go to an American, in the Far East to a Chinese, in Western Europe to France, in the Mediterranean to the British, in Eastern Europe to Russia.



Hyakutake meets the Marines

By Capt William H. Whyte Jr.

SYNOPSIS

Events on Guadalcanal from the time the marines landed in August had disappointed LtGen Haruyoshi Hyakutake, Commander of the SEVENTEENTH ARMY, which was spearheading the drive towards Australia and New Zealand. The Ichiki Force had been virtually annihilated in the initial attack against the Guadalcanal airfield, and then, three weeks later, the Kawaguchi Brigade had failed dismally in its assault. Casualties had been tremendous, and the units which struggled back to the Matanikau River were in miserable shape. But the High Command, off guard when the evil Americans landed, had recovered. The SEVENTEENTH ARMY had started to land between Kamimbo Bay and Kokumbono, and Admiral Isoruku Yamamoto's Combined Fleet was ready for the kill.

Part Two-Conclusion

THE over-confidence had sobered the planning officers, who knew now that annihilating Americans would be difficult. There was the Matanikau River barrier to be secured. Even up at Rabaul, with only photographs to look at, Hyakutake had realized that a vital preliminary to the big offensive was a firm grasp on the sandspit at the river mouth. While it seemed doubtful that the Americans would leave the safety of their defense positions, Hyakutake was canny enough to recognize the importance of the river.

Why so important? The narrow river was not fordable, and the banks were lined with ridges so precipitous that virtually the only spot at which heavy equipment could be transported was over the sandspit running across the mouth. Since the big drive depended so much on getting across tanks and heavy artillery now being landed, Hyakutake ordered his Second Division commander, LtGen Masao Maruyama, to see to it that a fresh regiment defend the vital east bank.

When Maruyama arrived the first week in October with the first part of his Second Division he ordered Col Nakaguma's Fourth Regiment to move east to the Matanikau and take over from Oka. Col Nakaguma went on ahead of his troops to con-

When the American mortars opened up, Oka ran back to the safety of Nippon Bridge.

fer with Oka, expecting to find him on the other side of the river. As customary, however, Oka's command post was as far from the scene of any potential action as possible, Nakaguma finding him in a ravine well over a mile from his front. To justify his discretion, Oka painted a dismal picture for Nakaguma—so much so that when the latter's troops arrived he ordered them to stay on the west bank with only a few hundred to cross over.

By a miserable stroke of fortune that very day, the Americans made a bold attack at the river mouth, and within 24 hours had completely seized the east bank. When Nakaguma phoned this to Maruyama, the division commander was beside himself. He told Nakaguma to retake the position in an immediate night attack. It was all very well for Maruyama and his well-fed staff officers to talk of an "immediate" attack, grumbled Nakaguma, but there on the spot he had no communication, for his units had been scattered by the paralyzing suddenness of the enemy assault. It was already 0230—to counterattack was impossible.

Several days later the bulk of the Americans withdrew, but they left behind about a thousand men who promptly erected barbed wire barriers and pillboxes at the sandspit, over which the Jap heavy equipment, artillery and supplies were to have rolled. It was most regrettable.

The troops pouring down from Rabaul had little idea that things were so bad; their morale was superb. Only two weeks ago, it had been announced over the radio, "Our submarines have finally entered the Atlantic Ocean. The movement of our navy from the Pacific—which it has subjugated—is significant, and has been a tremendous shock to England and America."

This was a little hard to swallow in view of the savage American air attacks against convoys moving south, but it was probably the enemy's death throes.

The pep talks their officers gave the men was the first hint of trouble, for their leaders were very frank in warning them of difficulty, and in pointing out the stretegic importance of the battle.

Hyakutake had told his commanders and staff that Singapore paled in significance to Guadalcanal. Of course, it was no secret that he felt Gen Yamashita had gotten entirely too much publicity from the Malayan push, but a glance at the map was enough to convince them of the truth of Hyakutake's words.

The troops heard more disquieting rumors when they talked to the men of the Kawaguchi Brigade after landing. It had always been a well known fact that the American was basically a coward, unable to bear hardship, and worshipping only the material luxuries which could be seen in American movies. American tactics, their manuals had taught them, disdained the spiritual element exemplified by Japanese doctrines, and relied on materiel to keep the enemy at arm's length. Yankees feared cold steel.

But the Lunga Point veterans told them that these Americans were fierce brutal murderers known as marines. Chosen from the scum of the prisons and insane asylums of America for love of killing, they were so dreaded in the U.S.A. that they were invariably kept under guard there lest they lash out in uncontrollable massacre.

There was no type of atrocity they would not commit. One survivor of the Tenaru described how three comrades had advanced towards the marine lines waving a white flag. The marines machine-gunned all three before they had a chance to throw their hand grenades. The battle yells, once so unnerving to the enemy, now only provoked a return torrent of profanity and vulgarity.

I F ANY soldier had ever secretly entertained thoughts of surrender, such stories erased such thoughts. Officers promised their men that after the American capitulation, the marines would be



Hyakutake leaned on his G-2 who was baffled by the puzzling behavior of marines.

punished. All would be marched to the hallowed ground at the mouth of the Tenaru, where Ichiki and his heroic band had been slaughtered. After a ceremony, the Japanese would put them to the sword.

Despite these horror stories, Maruyama had full confidence in his men, for his Second Division was one of Japan's finest-founded many years before by the Emperor Shintake. Recruited from the Sandai District of Honshu, its soldiers were considered dull yokels by some, but nonetheless honest and diligent. After long Manchurian service it was brought back to Japan in 1941 to become part of Lt-Gen Hitoshi Imamura's SIXTEENTH ARMY, then being formed for the invasion of Java. After this campaign, it spent several months doing garrison duty until the American invasion of Guadalcanal necessitated its transfer to the Solomons. Speed was so essential that part of the division was transported on cruisers, the rest coming on in transports.

The first two weeks of October found the division being landed, as well as the service units, tanks, and heavy artillery of the SEVENTEENTH ARMY. As soon as the 150-mm howitzers were ashore they were brought up to shell the airfields (the Americans had now built another just west of the Lunga River). Although they quickly put the new one out of commission, the failure of Nakaguma's men to secure the Matanikau River crossing prevented the artillerymen from advancing to where they could stop activity on the main airfield.

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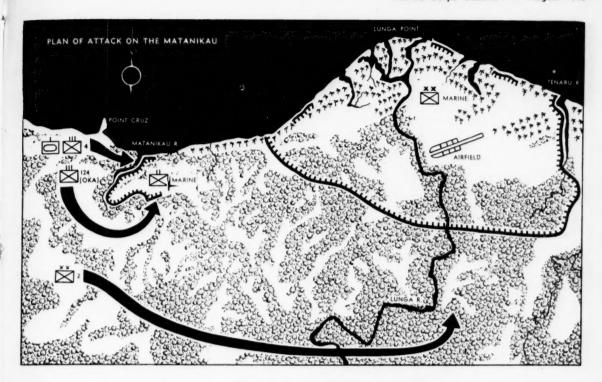
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The navy, however, helped to make up for this in a succession of terrific night bombardments. The best was on the 13th, when the battleship *Haruna*—which the Americans had "sunk" in their lying newspapers—and the battleship *Kongo*, plus three cruisers and six destroyers, had shelled the airfield for almost three hours.

The bulk of the Naval Air Force had now been concentrated at Rabaul for the sole purpose of neutralizing Lunga airfield. The Americans had few planes, but it had to be admitted that they used them skillfully. The Imperial communiques daily claimed vast numbers of them shot down, but the men could see many more of their own planes shot down than were admitted. It was most puzzling how the enemy kept the airfield going. Observers could watch the Americans race out with trucks to fill in the bomb craters with dirt while the bombers were still overhead.

As psychological support, all of the homeland's short-wave propaganda was beamed on the marines. It was really most clever, particularly the "Zero Hour." Little Orphan Annie, after playing several Yankee jazz records, would remind the marines of the hopelessness of their cause, hint at the faithlessness of their wives and sweethearts, and try to stir up homesickness by recalling to them the memories of beefsteaks and pies.

With Little Orphan Annie, bombers, artillery,



and battleships, the softening up was well under way when Hyakutake arrived on the 17th to assume personal command. His plan had been prepared at Rabaul, but changes in the situation, particularly the regrettable action at the Matanikau, necessitated alterations.

Hyakutake leaned heavily on his G-2, LtCol Matsumoto. In making his estimate of the situation, the latter had been somewhat handicapped by the failure of any marines to surrender, but the observation posts atop Mambulo virtually looked down the throats of the Americans. The enemy couldn't move a truck, a plane, or a Higgins boat without its being spotted through powerful telescopes. The Americans had become more skillful in concealing patrols, but there were few large troops movements that weren't followed, and the day-to-day progress in the construction of barbed wire barriers, antitank barricades, and gun positions was noted. Aerial photographs, Navy reports on enemy coast defense guns, and captured documents helped Matsumoto round out the picture.

He decided an entire division was defending the Lunga Point area by a continuous line of barbed wire, trenches, and pillboxes, with a battalion holding the advanced outpost position along the east bank of the Matanikau. Although captured organization tables of a marine division showed it to contain about 17,000 men, reports by Col Oka and MajGen Kawaguchi made it clear that at least 7000 marines had been annihilated. Thus, against only 10,000 marines, Hyakutake with his 25,000 would have better than a two-to-one quantitative superiority, in addition to the overwhelming spir-

itual superiority inherent in the Japanese soldier.

Hyakutake decided to split his army into two task forces. One, under MajGens Ito and Sumiyoshi, would assault the enemy battalion's positions at the Matanikau, while the other, under Gen Maruyama, would cut a secret trail well to the south of Mambulo, then strike north and launch the main attack over the same ground as had Kawaguchi in September. Since the Western Force was already in position, it was to wait until Maruyama's force had crossed the mountains to a position south of the airfield; then the attacks would be launched simultaneously.

Hyakutake had hoped that Maruyama would be in position by the 20th, but it became apparent he was moving slower than expected. This was very annoying, and the impatient Hyakutake finally decided to go ahead with the Matanikau attack, reasoning that to launch this blow might suck the enemy's reserves westwards, leaving only a thin crust around the airfield for Maruyama to break through.

It was planned that Oka's regiment would cross the Matanikau by the Nippon Bridge on the night of the 21st, then turn northwards and attack the battalion flank. At the same time Nakaguma's Fourth Regiment, with the 1st Independent Tank Company in the van, would force a crossing of the sandspit. All of Gen Sumiyoshi's massed artillery would support the attack.

J UST about everything went wrong except the guns, which fired on schedule, but as soon as tanks approached the sandspit the lead one was

knocked out by an American gun concealed on the other side of the river. Just as the enemy's artillery began to open up, a message came through from Hyakutake's headquarters calling off the attack. Col Oka, as usual, was about 24 hours behind schedule.

The 21st had been a bad day, but there had been few losses, and by the evening of the 23d everything would be ready for a really coordinated attack, for Oka had finally crossed the Nippon bridge. This time the assault would be pressed home at all costs-Hyakutake made that quite clear, especially to Col Oka, with whom he was extremely irritated. The latter was ordered to attack the southern flank in the afternoon, rather than at dusk when the other units were to attack. Hyakutake considered this rather clever. If Oka was as tardy as usual and didn't attack until the others did, well and good; if he did the unusual and struck at the appointed time the enemy would be diverted away from the river mouth upon which the main blow would fall. At 1800, Gen Sumivoshi would concentrate the fire of all his heavy artillery on the enemy positions in a violent 10minute bombardment, then the Fourth Regiment would drive across the sandspit behind Capt Maeda's twelve 17-ton tanks.

As the sun slowly went down, Nakaguma's men crawled through the trenches they had dug up to the very banks of the Matanikau, and put their machine-guns in position. Antitank and 70-mm gun crews wheeled their pieces up to camouflaged spots. Not a sound was made, for while more than 2000 men were creeping through the coconut grove to the river, on the other side the marines could be seen chatting and smoking by their foxholes. By the time twilight was waning, the entire force was ready to pounce, the tanks within 100 yards of the spot over which they would race to break through the marine positions. On the hills to the west 75-mm, 105-mm, and 150-mm guns and howitzers were zeroed on the mouth of the Matanikau, the battery commanders waiting at their phones for the signal to fire.

Suddenly, as a red parachute flare went off, the bombardment began. Machine-guns, grenade dischargers, antitank and 70-mm guns joined in with the artillery. The tanks moved to their jump-off positions, the noise of their motors drowned out by the explosion of the shells. The American machine-guns opened up, and their mortars began to fire, but it was too late, because the lead tank, with the courageous Capt Maeda in command, lumbered out onto the spit, turned, and with the throttle wide open, raced towards the enemy pillbox at the other end. In the light of the American flares, the men could see it tear right through the barbed wire entanglements. There was a roar of "banzais" as it crunched down the top of the pillbox. With the other tanks roaring across the spit behind him, Maeda quickly wheeled his tank to the left,

got out onto the beach and raced down the enemy's flank. Just then, a marine fanatic left his foxhole and thrust a grenade in the tracks before Maeda could depress his machine-guns to stop him. The explosion of the grenade threw the tank out of control. No sooner had Maeda gotten it going again than an enemy half-track antitank gun, half concealed in the jungle, fired at him. Maeda swung his tank out into the surf in a wild effort to evade it, but the next shot hit home.

Within a few moments similar disaster struck the other 11 tanks and they became blazing wrecks. As the crews, screaming in agony from their burns, crawled out of the turrets to escape, the marines ripped them with machine-guns.

But the officers kept yelling for the men to go forward. Several, who had fashioned little camouflage rafts of twigs and leaves, slipped down through the marsh weeds and began swimming slowly across. There were fiendish shouts of glee from the brutal Yankee dogs as a fusillade of rifle bullets tore into these heroes before they had gone a few feet. The marines began to increase their artillery and mortar fire. It was every man for himself now, but there was no escape, for a curtain of heavy artillery fire was falling to the rear, cutting off any retreat.

WHEN morning came, a few survivors found the coconut grove strewn with the mangled remains of comrades. In the stagnant river, two crocodiles lazily snapped at the half-awash bodies of the scouts, while on the sandpit the marines could be seen gaily talking away as they searched through blackened tank hulls for souvenirs.

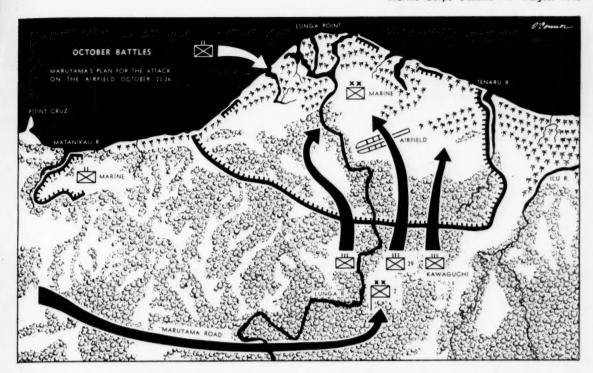
Where had Oka been all this time?

He was supposed to have attacked the ridge forming the enemy's southern flank early the afternoon of the 23d, but Gen Ito, his immediate superior, scanned the ridge all day without seeing any evidence of the marines being disturbed in their chores. As H-hour for the Fourth Regiment drew near, Ito frantically radioed Oka to hurry and launch his attack. Oka sent only evasive replies, promising the attack any minute.

The minutes gave way to hours. Came the suicidal attack of the Fourth and not so much as a shot from Oka's direction. All during the night, as the full force of the marine artillery concentrated on Nakaguma's men, there was silence on the marines' southern flank.

Ito, now wild with rage—for he had to account in turn to Hyakutake—radioed message after message the morning of the 24th demanding an immediate attack, but every time he looked at the southern ridge he could see nothing but marines calmly digging entrenchments. At length he received a message from Oka stating that a lookout position had been "captured" on the northwestern slopes of Mambulo.

Oka had evidently tried to burn the candle at



both ends. After crossing the Matanikau, instead of keeping his unit in an assembly area close to the enemy ridge, he had marched southwards towards Mt Austen, in order to be as far away as possible from the American mortars until the time for the attack. The official report finally submitted to Ito completely whitewashed this wretched performance, possibly as it was written by Oka himself. It described how the "regimental commander" (Oka) urged his unit along through incredible hardships, clearing a road through "jungle, precipice, and ravine" so that the attack could be launched at 1300 of the 23d. The report then said that due to the "confusing terrain and extremely sharp gullies," progress was slowed up a bit, despite the example set by the troops' fighting commander.

At length, at dusk of the 24th, some 29 hours late, Oka finally had his battalions at the foot of the ridge. After scaling the ridge, each battalion would head for one of the prominent hills indicated on the operations maps.

The attack started off quite successfully, and the men poured over the ridge, but when the puzzled battalion commanders looked around for the hills they were supposed to take, all they could make out was a succession of labyrinthine coral ridges—all the same height. By the time the enemy began to react with violent firing the units were completely lost—some firing on each other in the confusion.

Oka, after having given his commanders one of his "pep talks," remained in the ravine south of the ridge. But when the enemy mortars began to open up and it appeared that the issue might be in doubt, Oka hastily abandoned his command post and trotted back to the safety of the Nippon Bridge, several miles away.

Disgusted with Oka, and with the enemy threatening to defeat each unit in detail in the coral ridges, the battalion commanders began to withdraw to the ridge. When daylight came many of the units found themselves completely exposed in the grassy ravines with no concealment. Then the marines, few of whom could be seen, opened up with devastating rifle fire. The final blow came when about 200 marines charged down from the ridges to the north, bayonets flashing and screaming weird yells and whoops. It was terrifying.

Now recovered from his fright, Oka submitted the final report. He had to admit that against 281 dead or missing of his own command, only 200 marines had been definitely killed, although one had been captured while semi-conscious and was "disposed of on the spot."

The attack on the Matanikau had been a failure because of piecemeal assaults, the failure of Sumiyoshi's artillery to neutralize the marine positions, and above all, the pusillanimous action of Oka. But while no ground had been gained and the Fourth Regiment annihilated, there was evidence that the enemy had moved reserves from Lunga Point west to the Matanikau. Hyakutake rationalized that perhaps the Matanikau attack might not be such a failure after all if Maruyama could break through a weakened enemy line when he assaulted the airfield.

Two weeks previously, Gen Maruyama, then at Kokumbona, had ordered Capt Oda to take his engineer unit and blaze a trail from Kokumbona around the southern side of Mambulo to the spot south of the airfield from which the main attack would be launched. After spending an entire day going over aerial photographs of the area with Col Matsumoto, Oda and his group set off. By 14 Oct they had descended the sharp cliffs bordering the upper Matanikau, crossed the river, and reached the base of Mambulo. Cheery messages were sent to Maruyama informing him that there was only another day's work to cut the trail to the Lunga.

But the next day found the group reaching one ridge only to find another directly ahead—and none on the map. An argument broke out between Capt Oda and 1stLt Hisatomi, one insisting the best route was due south, the other southeast. It now appeared that Mambulo was not the one single height the maps had indicated, but rather a confusing mass of ravines and cliffs.

Aerial photographs showed only fleecy clouds, and solid jungle.

However, after many false starts, and considerable bickering between Oda and Hisatomi, the Lunga was reached on the 17th.

BACK at Kokumbona, Maruyama was under the impression that everything was well, principally because of Oda's optimistic reports. Accordingly he ordered his main force to advance over the trail (now named "Maruyama Road") with five days' rations. This didn't allow much leeway but Maruyama saw little sense in burdening his men—after the battle he would feed his men from captured marine stocks.

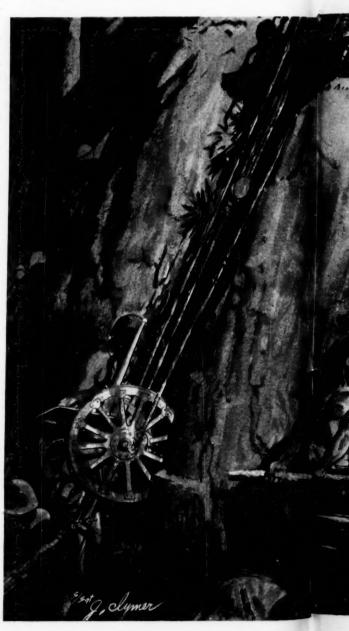
Until they reached the headwaters of the Matanikau, the main body made fairly good progress, but when they reached the cliffs towering over the river the trouble began. Oda's lightly-equipped trail blazers had been able to crawl down them by grasping the tufts of grass growing from the coral. but the men of the main force were burdened with not only 50-odd pounds of personal equipment but machine-guns, grenade dischargers, and ammunition. There were no mules and all of the division's horses had been left at Rabaul, so the heavy ordnance-the 37-mm antitank guns, 70-mm and 75mm field pieces had to be manhandled. The only way to negotiate these cliffs was to lower the field pieces by ropes. Such a slow process was impossible in daylight with the American planes circling overhead like vultures, so most of the difficult crossings had to be at night.

It soon became apparent that everyone must go on half-rations. The toll on the men had been heavy—they were getting practically no sleep, and their muscles burned, but their officers set them a splendid example. They are no more than the men, and, save for some of the senior officers, carried machine-guns and ammunition like the privates.

The heavy ordnance had to be manhandled, the guns let down the cliffs with ropes.

These men of Japan's finest regiments had not tasted earlier defeat, and they were imbued with a sacred mission. Often, when it seemed impossible to advance a step further without collapsing, the officers would lead their own men in the singing of the "Kima Ga Yo"—the national anthem. Facing in the direction of the homeland the men, tears streaming down their cheeks, would sing as loud as they could, and let Yankee patrols be damned.

Often had they heard the Imperial Rescript of the Emperor Meiji, but never under more impressive circumstances than when it was read to them in the Mambulo jungles before they began the day's march. The old familiar words, always inspiring, took on new meaning as they were punctuated by the eerie calls of the cockatoos overhead.



... "I am your Commander-in-Chief, you are my strong arms. Whether I shall adequately fulfill my duty to the Ancestors depends on your fidelity. If you unite with me, our courage and power shall illuminate the whole earth . . ."

By the 20th, the forward units had finally crossed the Lunga, but so far upstream there was still six miles of jungle between them and the airfield. Still, the worst of the 35-mile trek was over, and the enemy had apparently not yet perceived the move. Since there appeared to be a strong possibility that the Americans might capitulate even before the attack jumped off, Maruyama instructed his units on the 21st that in case the marines forwarded a surrender proposal they were to be told that they must lay down their arms immediately and leave

their supplies and equipment intact. The enemy commander, a MajGen Vandegrift, according to the American press, was to walk to the mouth of the Matanikau and formally surrender to Gen Hyakutake.

Maruyama had planned that the main effort would be made by the 29th Regiment northward over the same ridge that Kawaguchi had attacked in September. On the left, the 16th Regiment would drive toward Lunga Point along the west bank of the Lunga, while over on the right Gen Kawaguchi, back once more at his old stamping grounds, would push through with a force of about 2500 to the eastern end of the airfield. If all went well, 1000 men from Kokumbona would sneak along the coast in barges and make a direct landing



at Lunga Point, landings being a Jap specialty.

On the basis of the flood of optimistic reports, Maruyama expected that his units would be ready to attack by late afternoon of the 22d, but he finally realized that they were far behind schedule, and postponed the assault to the 23d. From the mountains by the upper Lunga the airfield had seemed tantalizingly near, but down in the steamy jungle ravines the men were barely moving. Heavy rains had churned the ground into a quagmire, and the trails were so slippery the slightest grade called for ropes. Came the 23d and the force was still bogged down. Again Maruyama had to postpone H-hour—this time until 1700 of the 24th.

It's understandable that the 29th should have been chosen to launch the main attack, for in all of Japan no regiment's colors were more honored. Even the Yankee LtCol Warren Clear, who had spent many weeks with it as an observer prior to the Greater East Asia War, had written of how it had made a practice march of 122 miles in 72 hours and double-timed at the end of it.*

I N AN order of the day, the commander, Col Furumiya, had exhorted his men to push without stint for the honor of their regimental colors and the great traditions it represented. But struggle as they might, they could not advance quickly enough. When H-hour came, the lead units had become hopelessly lost. An officer patrol was sent forward to spot the enemy positions, but could find none. The sickening realization that they were still miles to the south of the airfield was not helped by a torrential downpour that made the going even more difficult. Furumiya had had two battalions

*"Close-up of the Jap Fighting Man"—LtCol Warren J. Clear, USA; Infantry Journal, Nov 1942. advancing abreast and one in reserve, but this tidy formation became thoroughly mixed up as each unit hacked trails in what they thought was the right direction. Finally, just before midnight of the 25th, 31 hours late, the forward units ran into the enemy positions. There was no artillery fire to support them, and the units were disorganized. As soon as the enemy learned of the attack they began firing heavy concentrations of machine-gun, mortar and artillery fire. Furumiya's companies couldn't mass for bayonet charges because of the shells.

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The men were not advancing as they should. Determined to inspire them, Furumiya with a group of men and the regimental colors rushed the enemy barbed wire, his Samurai sword flashing. The men saw their commander break through the American line but a fresh burst of fire stopped them dead when they followed him. Attempt after attempt was made, but the assaults grew weaker as the artillery grew fiercer.

When morning came, Maruyama found that while the 29th had been almost cut to pieces, the regiments on either side hadn't even made contact with the Americans.

There seemed little chance that a continuation of the attack could have any real success. The temptation to withdraw and conserve the unit's strength for a later attack was strong. But it was not in the tradition of Bushido for a Japanese warrior to abandon a course once taken; Maruyama radioed Hyakutake that all was well, and that the airfield was as good as captured. He meanwhile ordered increased daylight reconnaissance in preparation for another attack that night.

But Maruyama, as he well knew himself, was butting against a wall. He had lost his precious



weapon—surprise. Officers grumbled that to attack against fixed defenses without heavy artillery support was suicidal. Defeatism had begun to seep through to the tired and hungry men. The Division motto had once seemed glorious—"Remember that Death is lighter than a feather, but that Duty is heavier than a mountain." They would do their duty all right, but death had lost its attractiveness in the bodies of comrades, decomposing in the sun.

The final attack didn't even get as far as the first one—the punch was gone. The enemy lines in front of the 29th Regiment had been strengthened, while over on the right, Gen Kawaguchi, taught discretion by his experience in the same area, saw no reason for another useless slaughter. Before dawn broke, Maruyama realized that he could no longer delay a retreat.

Meanwhile, his earlier and somewhat premature victory dispatches, embellished by each higher headquarters as they were transmitted back to Japan, were taking effect. There was rejoicing throughout the Empire as it was announced that the airfield had been seized and that the American capitulation was expected. In propaganda, Radio Tokyo proclaimed to the marines, "As a result of the battle . . . you are now marooned, with no communications. You are deprived of arms and ammunition, and your resistance is leading you only to death!" The point was further driven home to the Yankees by a comparison to their national game, "The score stands U. S. Navy-0; Japan-21, with the Japanese deep in American territory, 10 yards to go. Coach Roosevelt passes up and down chain-smoking cigarettes. A pass is knocked down. America calls time out and Ghormley is pulled from the game. The Rising Sun cheers loudly for Coach Tojo. Roosevelt sends in Halsey to call signals. Another pass is called, but the ball is fumbled on the one-yard line, and the heavy favorites, the U.S., are in a bad way as the gun signals the end of the first half.'

The Second Division's attack on the airfield had been a bloody failure, but even in defeat honor could be saved. Furumiya and the regimental colors of the 29th were still missing—they had to be found at all costs. Hyakutake himself ordered that no effort be spared to find him. On the night of the 26th, Maruyama sent out a six-man officer patrol. They returned empty-handed. The next night, even though the retreat had begun, a still larger group of 10 went out . . . again, no luck.

Only a few hundred yards separated the searching parties from Furumiya, but it might as well have been miles, for American barbed wire lay between them. The night of the first attack, Furumiya's group had penetrated the lines, but when dawn broke the next morning he found the gap closed by American reinforcements.

There were only nine left with him—Capt Suzuki, Lt Ono, WO Kobayashi, and six men. They hadn't been spotted by the enemy yet, but although each had draped himself with vines and leaves it seemed that only a miracle would prevent the enemy from stumbling across them.

At first it had seemed that there was only one course—suicide. But as Furumiya thought the matter over several objections arose. The colors had to be destroyed. Burning was the only safe means of disposing of them, but the smoke of a fire would attract attention. To bury the colors would be unsatisfactory, for the Americans were doing a prodigious amount of digging and might easily uncover them. Death would be sweet, reasoned Furumiya, but clearly his duty lay in escaping with the colors. Lt Ono and two soldiers were dispatched to find an escape gap through the lines, with instructions to report back as soon as they had found it.

WHILE awaiting Ono, Furumiya peered through his veil of foliage at the activity of the Americans in the little plain in front of him. He marveled at the way they went about their business efficiently and without much talking. He was particularly interested in the disposition of the enemy defenses. The machine-gun nests were spaced about 50 yards apart and no one seemed to stand by them. Furumiya concluded that the machine-guns were fired by electricity, and directed by remote control.

When eight hours had passed without the return of Ono's group, loyal old WO Kobayashi crawled off alone to find them. But when night fell and even he had not returned, Furumiya again considered suicide. The circumstances almost demanded it—he had failed. Tears came to his eyes. Here he was, the commander of one of the Emperor's finest regiments, miserably hiding in the enemy's camp! He looked at his Samurai sword. Was the blade that served his ancestors to lie rusting in this jungle or be soiled by souvenir-hunting Yankees?

Suddenly it came to him—he would not slink through the American lines; he would attack! Happy at this thought, he drafted a complete regimental operation order for his five men. H-hour would be 0440, the "objective" a point in the line 20 meters east of the spot where they had originally penetrated it. The group would advance silently until they reached the front line, then they would rush it. In the event of casualties, he drew up a list designating his successors as regimental commander.

A little after midnight, the six men crawled up to the edge of the jungle. Between the jungle and the front line there was a grass-covered ridge they had to cross. In the moonlight their silhouettes could be spotted by the enemy sentries, so they crept along the edge of the jungle. When clouds obscured the moon, they would dash across the open space. So skillfully did they do so that, although they passed several American positions, no alarm was given. But when it became daylight,

they were still 100 yards from the lines.

All during the next day, they hid in a clump of vegetation, not daring to move, for they were next to a mortar emplacement. Hunger and thirst had become almost unbearable, particularly when they could smell American cooking not far away.

Although once again on the verge of suicide, Furumiya decided on taking one more crack at escaping. This time they would break up into two-man groups, each going off in different directions. They ended up, however, by moving together and this time they were fired upon by the enemy.

With a searching party combing the jungle for them, it was now obvious that escape was impossible. Furumiya asked Capt Suzuki if he was ready to kill himself. Capt Suzuki nodded his head gravely. Furumiya slowly scrawled a note to Gen Maruyama, apologizing for his failure, and explaining that he would take the regimental colors and tear it to bits. Tearfully, he began ripping the flag to strips, tearing each strip into pieces. A searching party thrashed through the bush. Frantically, Furumiya threw leaves over the brilliant red and white scraps of silk, and ground others into the dirt. Capt Suzuki had drawn his pistol and was waiting quietly.

It was better this way. Like the men of the SEVENTEENTH ARMY now struggling back to the Matanikau, Furumiya knew he and his men had been representing the honor of Japan in a battle whose decision would be final and irrevocable, and he knew they had lost. Better that he die now and join his ancestors at the Yasukuni Shrine than taste defeat again. As Capt Suzuki raised his pistol to Furumiya's temple, the regimental commander scrawled his last words to Maruyama. . . . "The mission of a Japanese warrior is to serve his Emperor!"

IT CAN HAPPEN TO YOU

It is the obligation of every Marine officer to be constantly ready to carry on, not only with his own duties, but with additional and greater responsibilities that may be thrust upon him in battle.

In every operation casualties are inevitable. You or the man next to you may fall before enemy fire, but in every case the completion of the job at hand is left to those still in the fight.

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MPs on the Beach Manuals lag far behind on beachhead

police, who must be traffic cops, PW chasers, straggler guides, dump guards, scouts who go past front lines to keep souvenir hunters out of fire lanes. By LtCol Lewis N. Samuelsen

IT HAS been our experience that no amount of training will make an effective MP out of a man who does not have certain fundamental qualifications to begin with. Some of these are characteristics which cannot be judged from appearance or records. Accordingly when selecting men for MP duty we try to get men who want to be MPs, who are of better than average height, have a high school education, good military record, soldierly appearance, and a comparatively mature outlook. Then, as training progresses, we weed out those who fail to demonstrate the essential qualities of force, leadership, intelligence, and integrity, without which the MP cannot operate effectively.

Before going into details of training, a review of the functions of the military police in an amphibious operation is indicated. In our Division, the military police are initially part of the shore party. for whom they direct traffic on the beaches and to the dumps; keep working parties from wandering off looking for souvenirs; prevent pilfering; guard prisoners brought to the beach for evacuation; guard dumps until quartermaster personnel can take over; prevent lateral straggling on the beaches. As the beachhead is expanded, they set up traffic control inland, establish a straggler line. set up and operate prisoner of war and civilian internee stockades; maintain information stations; direct casuals back to their units; lead convoys over previously reconnoitered routes; prevent looting; establish guards on captured enemy installations of intelligence or economic value.

To prepare our men for the performing of these diverse functions, we concentrate on training in map reading, traffic control, straggler line operation, and the handling of prisoners. All phases of individual combat are also important, but since the instruction therein is the same as for all other marines, there is no need to discuss it here. Map reading, of course, is also a subject of general training, but it is especially important for the military policeman; he must be able to recognize on the ground the location of the straggler line and straggler collecting point shown him on the map; he must be able to pick out on the map defiladed roads and routes; he must be able to memorize locations of installations and to direct others to them; he must be able to report the exact locations of road failures and traffic hazards.

Regarding technical military police subjects, there is little effective instructional material, with the single exception of that concerning traffic control methods. This subject is covered most ade-

quately in FM 29-5, Military Police. However, we have not attempted to make traffic experts out of our men, except for a few key noncoms, because the amount of motor transportation and the road net involved in beachhead operations do not require a complicated circulation plan during the assault phase. The technique of intermittent traffic on one-track roads, selection of turnouts, and reconnaissance of alternate routes are the only subjects which we consider necessary in addition to the mechanics of point duty and convoy escort, insofar as the average MP is concerned, but we do maintain a small unit prepared to supervise the handling of any traffic problem likely to arise in a divisional operation.

On the subject of straggler control, the military police manual is fairly comprehensive on the purpose and operation of the straggler line. However, it envisages the control only of personnel moving from the front to rear on the theory that the rear is a safe place. In an amphibious operation, at least in the intial stages, this is not true—there are much safer places than the beach, which is as far back as one can go. Thus it is necessary to control not only persons moving to the rear from the front, but also personnel looking for personal safety by moving forward. A further aspect of straggler control not envisaged by "the book" is the necessity of preventing "forward straggling" by souvenir hunters, sightseers, and eager-beavers who "want to kill Japs," whose station of duty is in rear areas or on the beaches. This problem reached a high-point on Saipan, when the Second Marine Division for several days held a line extending through the southern tip of Garapan. There it was necessary for MP straggler patrols to operate in front of the lines in rounding up souvenir and liquor hunters, including marines, soldiers, sailors, and civilian war correspondents. The purpose was not so much to keep them from being killed needlessly as to remove them so that the troops holding the line could open fire on groups approaching their wire without having to wait until they were within hand grenade range to find out if they were friends or enemies.

The instruction in the straggler control activity of military police has included the mechanics of handling stragglers from the time of their interception to their return to their units, plus lectures on selection of a straggler line by determining the areas of greatest attraction to stragglers, be they looking for safety or souvenirs, and locating the line so as to intercept with a minimum of straggler patrols a maximum proportion of personnel trying

to reach such areas. To this we add our experiences in the ways and means employed in the past by stragglers in attempting to evade or talk their way by the straggler patrols, as a guide to what may be expected. Several times during the Saipan operation men intercepted by patrols stated that their units were "expecting a truck with ammunition and they sent me back to guide it up, because the driver doesn't know the way." It's a good story, but not when told by a member of a rifle company found to the rear of the battalion quartermaster dump.

In passing, it must be mentioned here that officers are one of the biggest problems of the straggler control units. Almost without exception, those officers referred to are in the "forward straggler" category, and try to use their rank to get by the patrol for the purpose of "seeing the fun" or collecting souvenirs. The successful defeat of these tactics depends entirely on the confidence of the military police in the backing they will receive from their own officers if they enforce the orders they have been given. In one situation, though, the problem was solved by a regimental commander whose CP was located a short distance behind the straggler line. He authorized the military police to refuse permission to any one to proceed past a certain straggler point within his sector without a "chit" signed by him. This cooperation, backed up by his refusal to sign chits except for valid purposes, removed a severe load from the personnel of the control point, and permitted the situation in Garapan. referred to above, to be brought under control.

On the other major subject of MP training, the handling of prisoners of war and enemy nationals, the only effective instructional material is that contained in FM 27-10, Rules of Land Warfare, and the general routines outlined in FM 29-5, plus the knowledge gained by experience. Since the Saipan operation was the first in which the handling of large numbers of enemy civilians was involved, we had no experience to call on with which we could train MPs in that phase of their work. What we learned on that operation, and subsequently used with considerable success on Tinian, covers the

problem of controlling thousands of starved, nearnaked, sick or injured, desperately frightened people who can't understand a word of what you say, of providing food and water for them (including milk for babies), of sheltering them from the sun and rain, of searching them and their bundles of personal effects, of organizing working parties, of air raid precautions, and of sanitation requirements.

WE HAVE found that the knowledge of even a few common words of Japanese was extremely helpful to our men. In addition to the other training, we are therefore giving a lot of attention to the teaching of a limited amount of Japanese to selected personnel. Anyone who has seen a Nip prisoner trying to tell a guard that he is sick, and then a corpsman trying to find out whether the prisoner is constipated or has diarrhea, will surely agree on the value of this instruction.

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The foregoing covers, in general, the training we consider essential for effective Military Police operations. A complete knowledge of these subjects, however, is practically worthless unless every man also receives training which gives him the correct psychological attitude to the job. Every military policeman must be convinced of three things; first, that as an MP, he above all other men is expected to carry out or enforce the orders given him; second, that so long as he carries out his orders precisely and to the best of his judgment, or in the absence of orders, he carries out with resolution that which he honestly believes to be reasonable, right, or duty, he will be backed up by his officers to the ultimate; and third, that while military police operations may interfere with the desires and perhaps the needs of a few men, they are formulated on the basis of benefitting the outfit as a whole and aiding in the accomplishment of its mission. Once a man selected as indicated above accepts these three principles to the point where he lets them control his activities completely, he will by plain common sense function reasonably well as a combat MP, under competent direction, even with a minimum of technical training.

* * *

Whale of an Anti-Sub War in Pacific Again!

On the way home from escorting a convoy, two pilots reported contact with a Jap submarine 35 miles from Eniwetok. They broke off for a run but the sub submerged. They depth-bombed the sub when it reappeared at 1230, an hour and 40 minutes later.

Other members of the squadron joined in, and attacked whenever the sub surfaced. After three hours of determined attacks, the sub was positively identified by the pilots and gunners of five planes as a whale. Photographs confirmed the identification.

It was decided not to submit an Anti-Submarine warfare report.



Practice What We Preach Operations orders

usually are brief, but annexes ramble on with verbiage that is neither interesting nor informative. Don't repeat the SOP. Don't bypass chain of command. By Col William F. Coleman

FROM time immemorial military men and schools have preached the general of the second and directness in the matter of preparing orders or plans. Everyone apparently agrees that this teaching is sound and desirable in view of the fact that no formal protest against such doctrine has ever been recorded. And yet there must be something wrong some place because the available records of amphibious operations conducted so far during this war indicate that the ideas taught so religiously in schools are being constantly and flagrantly violated in actual practice. Orders for a division operation are two or more inches thick, and regimental orders reach awe-inspiring proportions. The net result is that a recipient of such a voluminous set of orders or plans is inclined to marvel at the industry of the headquarters which compiled them but certainly displays a decided disinclination to start digesting this mass of miscellaneous information to find out what it is all about. And usually, after he does fight his way through this obstacle on the road to the battlefield, he is more confused than enlightened. It appears that in some operations the paper issued in connection with them covered more acreage than did the objectives!

The cause behind the issuance of such lengthy orders possibly lies in a commander's desire to insure that every little detail even remotely connected with the operation is adequately covered. This desire is carried out to the point where matters of doctrine, SOP, and training are repeated and enlarged upon in orders. Or, the cause may lie in the desire of a subordinate commander to convince higher headquarters that he is on the job. Or again, it may be simply the desire of a commander to "keep up with the Joneses" by issuing a bigger order than some other unit. An example of the latter tendency is found in the following account given by an officer attached to the staff of a flag officer during the time orders for a large amphibious operation were being prepared. In the course of the preparation of these orders the staff medical officer presented the flag officer with a well-written, concise and wholly adequate medical annex. Without even troubling to glance at the contents, the flag officer counted the number of pages to this annex, handed the whole thing back to the medical officer and exclaimed, "This has only three pages. It must be made much bigger than that."

It is agreed that an amphibious operation is a very specialized type of warfare, requiring more detailed instructions to subordinates and the closest kind of coordination and cooperation with supporting agencies such as aviation, naval gunfire, etc. These things in themselves indicate that we can reasonably expect orders for amphibious operations to be somewhat more voluminous than orders for a dry land operation. Granting these things, it is still believed that orders and plans as actually issued by commanders in the field contain much information that is neither of interest nor value to receiving units.

An examination of a large number of orders issued by all services in the Pacific theater during the present war shows that the major fault lies in our interpretation and use of annexes. More often than not the basic operation order or plan conforms to established principles of brevity and simplicity, but with the annexes it is another story.

In general, there are two types of annexes. One type is used to expand upon instructions found in paragraph 3 of the basic order. Examples are Engineer Annex, Artillery Annex, AAA Artillery Annex, etc. Current instructions state that annexes of this type should usually follow the form for a complete operation order but that information or instructions given in the operation order or administrative order need not be repeated in the annex. In view of the fact that the annex is appended to, and issued with, the operation order, there seems to be no need for inclusion in the annex of any information normally found in paragraphs one, four, or five, inasmuch as all this information must be contained in the basic order or its administrative order if they are well drawn. Why, then, not simply omit these useless paragraphs in annexes and save that much space? Even to follow the usual practice of writing annexes as follows:

Annex Dog to Opn O 1-45 (VPhibCorps) Engineer

> V Phib Corps, In The Field, 1000, 3 June, 1945.

File No. Classification

Task Organization (if and when needed)

Maps: See Opn O 1-45 1. a. See Opn O 1-45

2. Mission

3. Detailed instructions to task units

4. See Adm O 1-45

5. See Opn O 1-45

is time consuming both to the writer and reader and increases the size of the order without stating a thing that wasn't already known. Why not, then, be realistic about these annexes and write them

somewhat as follows, even though the recommended form is not adhered to?

Annex Dog to Opn O 1-45 (VPhibCorps) Engineer

V Phib Corps, In The Field, 1000, 3 June, 1945.

File No. Classification

Task Organization (if and when needed)

- 1. Mission
- 2. Detailed instructions to task units

Signature

Appendices
Distribution
Authentication

Annexes should not be held to a rigid form since the nature of instructions contained in them varies between such wide limits. On occasion, it may be necessary to include special administrative or communication instructions in a form as outlined above.

The second type of annex employed is that in which instructions of general interest to a whole command are contained. This is the type of annex which is the most abused and seems to call forth from authors the urge to write ad infinitum. Examples of this type of annex are Air Warning Plan. Naval Gunfire Support Plan, Air Support Plan. In the case of higher units, annexes such as those listed above properly must be in great detail, for they give definite and specific operating instructions to firing ships or air units, as the case may be. But for lower units, all that is necessary for an annex of this type is a very brief description of the nature and amount of support to be given the units concerned.

A set of landing force orders examined contained a most voluminous air annex (45 pages including 15 appendices) copied directly from the Naval Attack Force air annex. The heading was the only point of difference. This annex was distributed down to regiments, as far as the record shows, and it is questionable, to say the least, if the regimental commanders were greatly concerned about the detailed instructions for anti-submarine patrols, longrange sea searches, details of carrier operations. etc., which were in this volume. What the regiments wanted, and should have been given, was so much of the information as told them what support they were going to get, when they could expect it. and how could they ask for more if they needed it. Someone should have extracted that information from the NAF annex and compiled it as the air annex for the troops. This same fault has been observed in the case of naval gunfire and other annexes with the net result that troops are furnished so much information of a non-essential nature that is neither of use nor interest to them.

All too often it is found that annexes are not only used to convey specific orders or information to

units concerned, but also as training and instructional directives. One intelligence annex recently examined was quite lengthy and began with a general statement that the unit SOP applied. Then, to insure that it did, much of the SOP was included in the annex at various places. This practice, in addition to being repetitious and wasteful of time and paper, antagonizes subordinate echelons who are made to feel that they can't be trusted to carry out existing instructions.

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There is another current practice that is improper and has the dual effect of bypassing the chain of command and of increasing the size of our annexes. Corps artillery headquarters are the main, unwitting offenders, probably due to the desire to centralize the control of artillery in order to insure rapid, effective use of the mass of the artillery with the Corps. To explain by example, in several Corps artillery annexes examined it was found that specific orders and missions were given by Corps direct to the artillery regiments of the divisions, without reference to the division commander. This is exactly the same as the Corps commander ordering an infantry regiment direct what to do without going through the division commander. This abuse was carried to the extreme recently when one Corps artillery annex ordered an artillery regiment to support the division of which this regiment was an organic part. Unless the general understanding of organization and tactical doctrine is wrong, the artillery regiment is an organic part of the division for that very purpose. If the Corps wants to issue orders to the division artillery directly, then it must detach it from division and attach it to Corps artillery; otherwise Corps must deal with the division rather than subordinate units of the division. With Marine Corps organization, a Corps artillery annex need only be a general artillery plan which will inform the Corps as a whole of the scheme of artillery support. In the proper subparagraphs of paragraph 3 of the Corps operation order each division should be given the necessary tasks to accomplish with its artillery. Corps artillery headquarters should issue its own operation order for Corps artillery units based on the mission assigned it in paragraph 3 of the Corps order.

It should be pointed out that unnecessarily increasing the length and amount of detail in orders increases the chance of mistakes, discrepancies, and

Here is brevity—the Marine Corps career of one enlisted man:

RS, Enl, RDep, DI, IQ, PX, RR, qual ER, SkB, MD, TS, YdB, TC, InfSe, TrBn, BAR, BDks, BIV, FUR, AOL, MP, PAL, CM, LP, P&P, RDS, FMF, Pac, FwdEch, LST, D+2, IIA, CMed, Evae AP, MOB, PH, MS, ArrUS, SDA, R/R, FUR, GdDet, 38, OAD.

misunderstandings. For example, an order for a recent operation has just come to hand and in it the EEIs are listed in three different places. Yet the second and third time they are listed, something is either added or taken away from the original listing. This immediately raises a doubt in the mind of the reader as to what the EEIs are and, in fact, whether the commander knows what he wants.

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One other possible cause for the undue length of orders is the inability to distinguish between what is vital information for subordinates and what is merely interesting information. This is all too often apparent in paragraph 1 (b) of orders which will contain great volumes of miscellaneous information which by no stretch of the imagination could have any effect on the plans of the issuing or subordinate units. Likewise, it is current practice in many cases for lower echelons to include as part of their orders the same lengthy intelligence study that was prepared for the use of the higher echelons. All the battalions and regiments want to know and need to know is the study of the terrain as it applies to their contemplated Zones of Action and so much of the enemy situation as affects them. Giving them more information than this can in no way affect their planning or actions. Consequently, they should not be encumbered with it.

The foregoing has listed some of the faults to be found in orders and annexes as issued in the past. Let it be said at this point that this fault is not peculiar to the Marine Corps; the records show that the Navy and Army are equally guilty. One Army operation order issued in the Pacific theater contained 16 paragraphs rather than the conventional five. A study was made to determine why this wide departure from standard practice was made, but no good reason could be found. The order was capable of being written clearly and more concisely in the conventional five-paragraph form. It is by no means suggested that conventions never be departed from; they should be, when necessary and desirable, as in the case presented above for annexes. But unless something better is being achieved by departing

from them, conventions should be adhered to, for experience shows that they insure clarity, brevity, and understanding.

What are the remedial steps to be taken to reduce the volume of our orders? Basically, they amount to a common-sense application of the teachings expounded by our schools and service manuals and include the following:

1. Be brief, yet complete. Give orders clearly, specifically, and without circumlocution.

2. Distinguish between vital information and instructions which the troops must have, and merely interesting information which can in no way influence the action or plans of the troops. Give lower units only what they must have.

3. SOPs can obviate much order writing. Where SOPs exist, give units credit for carrying out the instructions contained therein and do not repeat these instructions in orders.

4. Remember that orders and annexes for operations are not training programs and must not contain directives for training.

5. Issue orders through the proper chain of command. Tell each subordinate echelon what it is to do, but let it determine how to do it.

6. Constant briefing of troops and staffs on the situation will keep everyone informed in general terms and eliminate the need for much writing. There is much to be said for the way a commander so often starts his orders in school problems, viz., "You are familiar with the situation."

7. Overcome the idea that orders must cover every minute detail in order to preserve a record. War diaries and special action reports form sufficient records.

The commander should ask himself, "If I had to write these orders out in longhand, would they be as copious as they are now?" In most cases the answer would probably be "No!" Ways and means would soon be found to reduce the size of the order without in any way reducing its effectiveness in transmitting the desires of the commander to his subordinates.

State Department Seeks Marines for Foreign Service

An opportunity for marines to work for the State Department as Foreign Service Officers is described in Letter of Instruction No. 1065, 28 June 1945. Qualified applicants may get applications from Special Services Officers, to be submitted through commanding officers.

Applicants must be from 21 to 30 years old, hold a BA or equivalent degree (or, if his college course was interrupted by service, have completed approximately three-fourths of his work), and be able to read French, German or Spanish.

All marines, including the Women's Reserve, on duty in the continental United States (exclusive of Alaska) and in the Caribbean area, are eligible. (Overseas applications will be accepted later.)

Upon endorsement by a commanding officer, the application goes to Special Service Branch, Hqs, for transmission to the State Department. Selected applicants are given a written test, and those receiving an average grade of 70 or better go on to an oral examination. Candidates whose average grade in both is 80 or more will be placed on an eligibility list, valid for two years, and may be called up for commissioning in the Foreign Service at any time during that period. Pay generally starts at \$2500 a year, with a maximum of \$10,000.

Close Air Support SOP MAG 24 got ready for

the Philippines by consolidating best doctrine of other units. Greatest stress was on reliable, adequate, deliberate and thorough communications. By LtCol Keith B. McCutcheon

WHEN Marine Air Group 24 was informed early in October, 1944, that it would give close support to an Army Corps in the Philippines a doctrine was set up for the operation.

The 37th Army Division was in the area at the time, so joint training problems were scheduled. All pilots had the opportunity to observe a terrain problem conducted by an infantry battalion simulating an attack on a Jap pillbox installation. To these problems the Group added planes in close support with their own Air Liaison Parties on the ground. Live bombs were not dropped, but the infantry actually fired everything in the book.

The Division furnished officers to lecture to the pilots on infantry tactics, organization, weapons, and recognition of U. S. armor and other vehicles. In return, the Group assisted the Division in training Air Liaison Parties which were to be available in case the JASCO (Joint Assault Signal Company) units were withdrawn after the campaign got underway.

During this training, JASCO teams, Division personnel undergoing training and MAG operations personnel gathered together to coordinate the training. Indoor training initiated the program and parties were dispersed to simulate a regiment in assault with two battalions in advance. Colored cardboards indicated the various radio nets involved: the SAR net by white, SAD by red, SADE by blue, and the Air Support net by green. Typical requests for air support were sent back through the proper channels and then a strike was verbally directed to fulfill the request. As the parties became more experienced, more complicated problems were set up. Later, the class moved outdoors and used radio equipment over a space of several miles. Planes were directed to the vicinity of the jeeps and later actually made dummy and then live runs. This final training was as close to actual combat conditions as could be simulated.

At various conferences prior to the operation it was brought out that the FIFTH AIR FORCE would furnish the Support Air Parties but they were not contemplating using direct communication between the Air Liaison Parties and the planes in the direction of a mission. The Navy concurred with the Air Force in this respect. It seemed to the Group that this was the only logical way to conduct close support, so further emphasis was placed on training its own Air Liaison Parties. These parties actually were a combination of the Air Liaison Party and the Support Air Party and they were to prove invaluable in combat.

In taking this point of view the Air Force was carrying out the policy of Marshal Sir Bernard Montgomery who, quoting *Time* magazine for 14 Aug 1944, "believed that though a tactical air force must be integrated with the ground forces, it must not be tied in piecemeal lots to ground units. Its function was massed, theatre-wide blows and deep penetrations to fill the gap between tactical and strategic operations."

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The Marshal was correct in his statement, but Close Support Aviation is not Tactical Aviation and there is a decided difference in the employment of the two. The Group did not intend to attach units to Divisions piecemeal but it did intend to have good control of its aircraft when engaged in close support, and if Air Liaison Parties were not to be permitted to give that control then the Group would send out its own personnel to give it.

Doctrine for Close Air Support

The doctrine as written and practiced by MAG 24 is quoted in full below.

Close air support is an additional weapon at the hands of the infantry commander to be used against enemy forces and installations holding up the advance of his own front lines.

A regimental commander now has at his immediate disposal the following types of weapons: 105-mm howitzers, 57- and/or 37-mm antitank guns, 81-mm mortars, .50 and .30 caliber machine-guns, bazookas, flamethrowers, rifles, auto-rifles, carbines, grenades and bayonets. He can further request additional artillery or tank support from the division commander. Each type of the above weapons has its own peculiar capabilities and limitations; they form a team and none can do the job alone.

Close support aviation is only an additional weapon to be employed at the discretion of the ground commander. He may employ it in either of two ways: (1) against targets that cannot be reached by his other weapons, or (2) in conjunction with the ground weapons in a coordinated attack.

In some situations the ground commander may use this air support in both ways. Planes may be called upon to bomb a target in preparation for an assault by ground troops and then they may be used to continue the attack by making dummy runs on the enemy position while the ground troops advance for the kill. Such dummy bombing runs serve a dual purpose; they distract and confuse the enemy and at the same time they enhance the morale of the attackers.

As in all military operations timing is most im-

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portant. Air support should be immediately available and it should be carried out deliberately, accurately and in coordination with the other assigned units.

K NOWING what close air support is, let us now investigate the various parties that make up the means at hand of carrying out the mission.

The support Aircraft commander is a unit air commander under the aircraft commander just as are the commanders of fighter and bombardment aircraft. The operations officer on his staff is his direct representative to control air operations and as such is normally the support aircraft controller (SAC). A SAC and his assistants comprise a Support Air Party (SAP); these parties are air force personnel and are located with divisions and higher units.

The operations office is the hub of the entire system and to conduct the operations efficiently the SAC has certain specialists at his command. Among them are intelligence officers, ground liaison officers, communications officers, assistant watch officers and enlisted personnel to act as clerks, orderlies, teletype and radio operators.

The intelligence officers with the aid of the ground liaison officers keep up-to-the-minute situation maps of the ground offensive. In case of missions involving "ground alert" flight crews the intelligence section can brief the pilots regarding the situation. They also interrogate the pilots upon their return to get data for keeping the situation map and for filing action reports.

The operations office is equipped with two-way radios to monitor the Support Air Request (SAR) net, the Support Air Direction (SAD) net, and the Support Air Direction Emergency (SADE) net. More will be said about these nets. In this setup there will be an additional circuit connecting the SAC with the operations office.

Air Liaison Parties (ALPs) are personnel attached to the unit infantry commander down to and including the battalions. They consist of an officer, radio operator and technician, and a driver. Normally they are transported in a radio equipped jeep in order to provide mobility to keep up with the advancing CP or OP. In case of radio failure they may be equipped to carry on communications by any or all of the following means: Panels, pyrotechnics, flashing light, message pickups, etc. ALPs are also equipped with sound powered or field telephones for communication between the observer and radio operator in case it is necessary to leave the jeep to secure a more favorable position for observation.

ALPs may be supplied by a Joint Assault Signal Company (JASCO) or they may be equipped and staffed by the supported ground units. In this case it may be expedient to attach available aviators to the ALPs to act in an advisory capacity on

such questions as the number of planes to employ, bomb loads, fuze settings and the nature of attack. ALPs supplied by JASCOs are sufficiently trained so that an aviator is not required.

In any event, before the operation it is highly advisible to brief ALPs, SAC, air coordinators, and the infantry and artillery commanders in order to develop a closer understanding of the various problems. Too much cannot be said about close cooperation and coordination between the various arms. It pays off with great dividends.

If the "air alert" or "on station" method of employment of close air support is used it is desirable to provide for an air coordinator. This person is an airborne officer of the Close Air Support Command (CASC) who directs the necessary planes to the targets via the SAD net subject to the control of SAC.

An experienced pilot is necessary to act as the air coordinator. Squadron commanders and executive officers form logical candidates for this duty. They know the capabilities of the pilots in their organizations and thus effect better teamwork than an outsider brought in especially for this purpose.

If available, it is further desirable to form air coordinator teams by adding a ground observer from the divisions being supported. This addition brings an experienced infantryman or artilleryman into the picture and promotes closer cooperation.

A third member of such a crew should be a qualified radio-gunner. To transport this team a TBF type is the ideal airplane. It can be equipped with the necessary radio gear, a quantity of smoke grenades, message drop and pickup equipment, Very stars, flares, etc., and it has enough gas capacity to keep it in the air long enough to conduct successful operations. Besides it has fixed machineguns which can be used for strafing and it is also capable of carrying a bomb load. (Note: SEDs were just as satisfactory.)

These teams should be kept as a unit and they should work the same area on all of their missions. By doing this the teams keep a better running picture of the overall situation and time is saved that would be lost if another team had to be briefed and oriented in that area.

Tactical squadrons will naturally be kept as a unit and work with an air coordinator from their own group.

As the reader has already guessed, communication is the crux of the entire operation. It must be reliable, deliberate, adequate and thorough.

I N general there are four radio nets to control the close air support operations.

- 1. The Support Air Request (SAR) Net. This is a voice radio channel linking the SAC, air coordinator, and ALPs. Two infantry divisions are a maximum on SAR net.
- 2. The Support Air Direction (SAD) Net. This is a two-way radio channel which links the SAC,

the air coordinator, and the supporting aircraft.

3. The Support Air Direction Emergency (SADE) Net. This is a two-way radio channel linking the ALPs with the supporting aircraft.

4. The Support Air Observation (SAO) Net. This is a two-way radio channel linking the SAC with the airborne observers. If it is not used the observers may be linked in on the SAR net.

In some situations there may be telephone or teletype lines paralleling the ground radio nets. They can be used as an emergency channel or to relieve the radio channels of unnecessary traffic.

As was stated in an earlier paragraph, close air support is but an additional weapon for the infantry commander. It does not supplant any of the other existing weapons and it cannot be considered a general competitor of either field or naval artillery.

Aircraft provide a mobile platform for transporting projectiles to the enemy but if the same target is within artillery range the latter can deliver a heavier and more accurate volume of fire per unit of time than aircraft.

When the infantry commander is "bogged down" and he makes an estimate of the situation he must weigh clearly the advisability of using aircraft in preference to artillery. Unless the attack is coordinated closely the planes will not do enough damage to warrant the cessation of fire by the artillery for the necessary length of time.

There are of course targets situated in some kinds of terrain which are inaccessible to artillery but which can be reached by planes. Then too there are installations such as Bloody Nose Ridge on Pelelieu which seem invulnerable to all artillery and aircraft.

If the ground commander decides to use close air support he makes his request over the SAR net. This request must contain the following information:

- 1. The nature of the target;
- 2. The location of the target;
- 3. The time the planes are to be on station for

Another article by LtCol Keith B. McCutcheon, on air support in action, will appear in September.

the attack and

4. The location of friendly troops.

A recommendation as to the type and number of aircraft to employ may accompany the request as well as information on bomb loads and fuze settings.

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The requests from the battalions reach the SAC at Corps CP and unless modified by the regimental or divisional commanders are acted upon by SAC and he directs the strike via the SAD net. As SAC is at the same point as the infantry and artillery commands close cooperation is available.

If there is one SAR net for two divisions there will be 26 ALPs, an air coordinator, and SAC on the net. It is clearly evident that the net will be heavily loaded and only one air support mission at a time can be handled. By using the SADE net one of the ALPs can direct a strike and a second can be handled by the air coordinator over the SAD net.

Target location is difficult and every available means should be used to designate them accurately.

There are two tactical procedures for the employment of close support aircraft.

The first method is to have all aircraft in a readiness condition at the field. Requests will come through SAC, pilots will be briefed by intelligence, and then the aircraft dispatched. This system is likely to be used for dawn attacks and strikes on heavily fortified positions. In the Navy SOP this system is referred to as "on call" and in the Army SOP it is known as "ground alert."

The second method, called "on station" or "air alert" by the Navy and Army SOPs respectively, is used in conjunction with an air coordinator. Aircraft orbit over a rendezvous point out of artillery danger areas and remain available until called for by the air coordinator. This system is the one generally employed for most missions. The time factor is reduced to a minimum.

Marines Get Themselves in Middle, Then Out in Front

Jap artillery helped 2dMarDiv marines reach their objective, escorted them 500 yards beyond and donated a town in Southern Okinawa.

First Lieutenant Paul E. Morrison, company commander, started to take his 1st and 2d Platoons. plus the machine-gun platoon, to a point about 300 yards short of the town of Ibaru. They moved forward, behind a heavy barrage of marine artillery.

Suddenly, the Japs laid down a heavy counterbarrage, but the shells landed behind the marines. As they advanced, the Jap artillery kept following them. Keeping just ahead of the shells, they reached the objective, but the Jap artillery didn't stop. So they were forced to keep going. They had to clean out snipers and machine-gun nests as they advanced, and at the same time move fast. But not too fast, lest they run into their own barrage, which was creeping ahead of them. When they reached Ibaru the Japs were so surprised they scattered and were quickly cleaned out.

The space between barrages became narrower. The Jap artillery was squeezing the marines closer to their own. Finally, however, they succeeded in getting word back and the American barrage was lifted. As a climax, the Japs stopped their shelling simultaneously. The marines had advanced about 500 yards past their objective, and overrun a town thanks to Jap artillery escort.

What's New Trends of Military Interest. By T/Sgt. Ray Moulden

¶ Quantico has devised an easy-to-make three-dimensional terrain map that platoon leaders can use for on-the-spot orientation of their men. Less fancy than the foam rubber relief to be found in the battalion CP, the blanket map presents graphically the essentials of a particular piece of ground for the benefit of the patrol or fire team working the area.

Sole construction requisite is a blanket. The rest of the map can be made of whatever bits and pieces or assorted gear happen to be available. Crumpled paper or mounded earth is shaped under the blanket for an accurate duplication of ridges, valleys, etc. Chalk lines indicate tactical boundaries. Surface features are—anything: Shoe or legging laces show roads and/or streams; buttons, pebbles or small squares of paper represent buildings, enemy positions; a strip of adhesive tape is the airfield; a trimmed leaf, a pond.

At Quantico, where this device was originated as a field training expedient, some marines got a quicker and clearer grasp of what they were up against than from a flat contour map.

WO Francis J. Newman, originator of the blanket map, reports a variant of this idea in a tactical training board, which helps bridge the gap between blackboard and class demonstrations either in field problems or actual combat. A blanket with a thick nap is draped over a framed easel, tacked on a wall, or strung between trees. The situation is outlined in chalk and cutouts are made of coarse sandpaper to represent tanks, warships, troop units, etc. The sand-surface cutouts adhere to the blanket nap wherever they are placed. They may be shifted around to represent the development of a situation, movement of hostile or friendly elements, or changes in position of weapons or fire ships. Students not too well versed in contours and the like understand the problem better and participate more freely in its solution than when working with a conventional map.



The map corporal studies the master map.

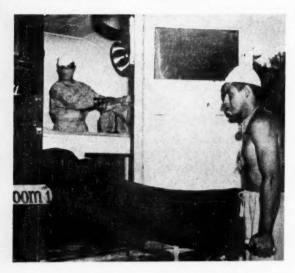




Terrain features are built up on blanket.



Works of man are marked by odds and ends.



Mobile operating rooms give spot medical treatment to wounded marines at Okinawa.

I Small monoplanes without ailerons, elevators or rudders, driven by pusher engines and maneuvered by controllable wings are foreseen by Consolidated Vultee's Stout Research Division. The organization is testing the planes, but it is admitted that many more years of research may be necessary before these craft become fully practicable for every day use. As now designed, the little plane resembles a streamlined auto with a small tail, to the rear of which the propeller is attached. The moveable wing is suspended from top of the cockpit cowling, and its position in relation to the fuselage may be altered at will by the pilot. The plane is expected to have greater safety and be easier for laymen pilots to handle. The craft was developed by George Spratt, who flew the ship 100 hours in secret. He cannot fly a conventional plane.

I High fuel consumption so far appears to limit the application of the thermal jet engine to short endurance military aircraft, Dr. M. J. Zucrow, of the Aerojet Engineering Corp., says. Dr. Zucrow told the American Society of Mechanical Engineers that designers will have to develop a plane of much lower drag to offset high fuel use before jet engines will be considered commercially practicable. Perhaps the most attractive feature of thermal jet is simplicity and low weight, although its high speeds and relative lack of vibration are important, Dr. Zucrow said. It uses cheaper fuels than highoctane gasoline and should require less frequent major overhauls. However, before jet can be applied effectively in commercial planes, metallurgical problems must be solved, due to the high temperatures of operation necessary to even modest fuel

¶ General Electric has designed a mechanical skull, that can breathe and can smoke, to test oxygen masks and the heated coverings required at extremely low temperatures by aircraft crews at high



This 10,000-hp ice-breaker climbs 15-inch floes, has three propellers, one in bow.

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altitudes. The Army's Air Technical Service Command prepared the specifications and is using the device. The skull has a layer of synthetic rubber flesh, which allows the mask to fit closely. Heating wires are laid on the spongy tissue and over this is placed a synthetic rubber skin. When electrically heated, it simulates the thermal properties of the human face. Breathing is simulated by electrically controlled lungs. In testing, the head and mask are placed in a chamber at 60 degrees below zero, and operated by remote control from a room at normal temperature. General Electric credits the device with eliminating danger to personnel testing masks, and permits experiments at much lower temperatures than hitherto possible.

¶ A remote-indicating compass has been developed by General Electric for installation in wing tip or tail of a plane far from disturbing magnetic effects of heavy armor. The compass can be read in the cockpit, as alnico magnets in the device affect electrical voltages in a wire coil so that corresponding coils in cockpit indicators move dial points identically with the compass.

Military engineers are still trying to figure out what the Nazis had in mind when they built the huge What's-It found at a proving ground at Hillersleben, Germany. What's-It has four wheels, each nine feet in diameter, with wooden pads. It would weigh about 100 tons and is heavily armored. The machine has seats for two drivers in an armored compartment 12 feet above the ground. The top of the vehicle is flat, and fitted with bolts to which some firing device, doubtless, could be attached.

Also found at the ordnance center was an antitank gun with a 30-foot barrel and bored for 120mm shells, and a 380-mm howitzer with a barrel nearly as wide as it is long.

 faster types of mass-produced all-cargo vessels. The ships will transport bulk of personnel from Europe to the United States en route to Pacific war theatres. Principal plan is to provide the personnel with quarters but provide space for bulk cargo on the return trip to Europe.

New weapons planned for use against Japan, and cleared by censor for the first time: Radar that can spot planes 120 miles away; 90-mm antitank guns capable of penetrating eight inches of armor at 61/4 miles; radio detonators designed to fire mines 20 miles away, on land or sea, by dialing a combination just as telephones are dialed; floating bridges of hollow aluminum beams, light enough for placement by hand and strong enough to carry a 43-ton tank.

¶ On display for the first time in public (outside of a war zone) are the 43-ton, T-26 S Pershing tank, armed with its 90-mm-3750-feet-a-second muzzle velocity and 14-inch armor penetrating capacity at 300 yards; the 10-inch mortar that drops a round accurately at 9300 yards every two minutes; the 155-mm gun, mounted on an M-4 tank chassis, with 14½-mile trajectory for its 95-pound projectile; the 8-inch, 41-ton howitzer, also mounted on an M-4 tank chassis, and with an 18,500-yard range; the largest mobile antiaircraft gun, using a completely assembled 105-mm shell, and having muzzle velocity of 3000 feet a second with shell bursts at 46,000 feet

¶ A.50-caliber machine-gun, capable of firing 1200 rounds a minute, 50 per cent faster than the .50s now used by the AAF, has been tested in combat and is now being installed in latest aircraft.

¶ A 50-gallon drum, a couple of spigots and sheet metal have been put together to create the Pacific's largest coffee pot—500 cup capacity. It was devised by Chief Cook Zack Hendrix, 3d MarDiv, who uses a pressure cooker under the drum. He made from a wrecked Jap half-track a grill for flat surface frying and another for deep fat frying. The two grills can cook eight dozen eggs at once.

¶ The Japs are now boobytrapping fresh vegetables; Second Marine Airwing ordnancemen found grenades with their pins pulled among heads of cabbage on Ie Shima. The area was well-mined, with the usual souvenir bait lying around, including a plane, complete with dead pilot.

Mobile surgery units, one created from scratch at a staging area, another now being built from an abandoned Jap trailer, feature medical service rendered marines on Okinawa by the Navy. The first unit, a large trailer assembled by a medical battalion on a SOPAC island and shipped to Okinawa over protest of landing authorities, who predicted it was too big to land on the beach, followed the Sixth Division throughout its campaign. It has porcelain sinks, running water, fluorescent lighting and complete instruments. Trundling behind assault troops, dragged over the rutted terrain by a six-by-six truck, the trailer often was used in opera-



When no longer needed, hide or destroy flask and all wrappers, directions say.

Emergency Kit

The 17 Kit, a miniature department store of drugs, food, notions, hardware and sporting goods, is now being distributed in quantity in the forward areas.

The kit, designed by the MIS Section in Washington, consists of two lucite flasks and an emergency mirror, and can be carried in the knee pockets of flight coveralls without being unduly bulky.

One flask contains sulfaguanadine, halazone, atabrine, salt, benzedrine sulfate, sulfadiazine, adhesive tape, iodine, adhesive compress, sulfanilamide, toothbrush, tweezers and eye ointment. The second flask contains chocolate rations, chewing gum, bouillon powder, razor blades, leader kit, fish hook kit, sewing kit, fishing line kit, compass, saw blade, prophylactics for waterproofing, sharpening stone and matches in a waterproof container.



The ubiquitous tropical chocolate bar makes its appearance in this kit, too.



Test stand for aviation pumps, valves and primers, with inventor PFC H. R. Cohagen.

tions on wounded marines a few minutes after they had been hit.

■ A 50-foot vacuum jug that provides stratospheric atmosphere samples is serving as a firing range to test superbomber and fighter artillery at a Statesside ordnance depot. The vacuum unit simulates conditions at 12,000 feet. Inside the unit, researchers fire 75-mm aircraft cannon point blank into a target of sand and armor plate 27 feet from the muzzle. The chamber can duplicate conditions encountered by planes climbing at 5000 feet a minute. The temperature drops to 70 below zero in 12 minutes and the air is as rarefied as at 50,000 feet. The range makes it possible to study the effect of falling temperature and barometric pressure on the detonation and speed of shells and on the firing mechanisms of the guns.

¶ Long range fighter planes are being equipped with autopilots to ease the strain on aviators during flight to Jap homeland areas.

When escorting the B-29 Superfortresses, the pilot can fly hundreds of miles from his advanced island base and still reach the combat zone in top physical efficiency.

This is done by turning the job of flying the fighter over to the autopilot. Then, even in the cramped quarters of the cockpit, the pilot can relax during the time he is flying over the long water hops to the areas defended by Japanese fighters.

While the autopilot is in control, the pilot occasionally checks to see that his compass and gyroscope are precisely co-ordinated. The combination electric and hydraulic systems of the autopilot do the rest. The plane follows its set course with exactness.

The pilot turns a valve and flicks a switch to resume control of the plane. Then, after completing operations in the enemy-defended zone, the pilot can chart his course back to his base, turn on the autopilot and relax again. On reaching his base, he takes the controls and lands. Thus, the autopilot does what the co-pilot does.



Battlewagon on tracks: This high speed powerhouse, the new General Pershing M26, with a high velocity 90-mm gun, can knock out tanks (or blockhouses) two miles away.

Handy Antitankers

(Continued form page 19)

should be familiar with all the weapons officer's plans and they must be thoroughly indoctrinated as to every possible duty. Every plan formulated must remain elastic enough to be adaptable to all contingencies. For example, the situation may require that the weapons officer commit his entire platoon to action, it may require only one section, or two sections on different sectors may be required. (Note: The T/O calls one SP a section, but in this instance two SPs are considered one section.) The weapons officer may wish to engage the enemy frontally or from the flanks, all depending upon the tactical situation. He must constantly bear in mind that the Japanese have demonstrated an unorthodox employment of tanks, and he must at times resort to equally unorthodox methods of combatting them.

When it is apparent or reasonably supposed that enemy tank resources have been exhausted, the self propelled weapon may still serve an important function as an assault artillery piece in direct and close-in support of front line elements. It has been a common and successful practice in the Pacific theater to place the self propelled platoon in such a position as to provide close-in support to a part or all the regimental front. With one battalion on line it is possible to keep the platoon intact and maintain it as a unit. Where there are two battalions on line it is ordinarily desirable to operate the platoon as two sections, one with each battalion. Where all three battalions are committed, the two sections of the platoon should be assigned to permit the greatest possible support throughout the entire regimental front.

When the self propelled platoon is assigned an infantry support mission, the weapons officer has the same preparatory responsibilities as previously outlined plus additional ones peculiar to this type of support. His reconnaissance must be made in anticipation of the fact that his targets may be diversified. Enemy machine-gun nests, field gun emplacements, pillboxes, blockhouses, buildings occupied by the enemy, and concentrations of enemy troops, are all legitimate targets for self propelled guns. It should also be remembered that the Japa-

nese make a common practice of converting mechanically inoperative tanks into armored machinegun nests.

The weapons officer must make his reconnaissance so comprehensive that he can employ his weapons to the best advantage on such targets of opportunity as may appear along the battalion front. He may often find that while the entire front offers possible targets, there are a limited number of approaches to suitable firing positions along the line. He must select the approaches and positions that offer the best available fields of fire and consequent coverage of his sphere of responsibility. He should then be prepared to submit to the infantry unit or company to which he is assigned recommendations he thinks proper to afford the greatest possible support to the infantry.

The weapons officer will often be called upon to explain the capabilities and potentialities of his weapons to the infantry unit commander with whom he is working. Here again lies the closest coordination between the infantry and the supporting weapons. They should remain close to the line where they will be available for immediate use. Again it is necessary that attention be given to a covered approach where practicable, and a covered assembly area. It is a necessity that the weapons be screened from enemy observation whenever possible as they will invariably draw fire from enemy mortars and field artillery, once they are sighted. Therefore, once the pieces have executed one or a series of fire missions, they should be returned to the assembly area.

If the infantry line is moving and the guns are to move with it, care should be exercised to exploit all available cover and security. The self propelled will often be required to remain in a position of support during the night. Although close to the line it is desirable in such contingencies to provide an assembly area that will provide protection from enemy flat trajectory and mortar fire as well as from observation. Routes of approach to the line much be carefully reconnoitered and plotted. The weapons and crews must be prepared in every detail for movement at night. Although it is never customary nor advisable to move at night it is a matter of experience that the Japanese may attempt a night tank attack. Again, in such a case, the unorthodox must be met with the unorthodox.

MAG 6 Makes 602 Landings in 131/2 Hours

Marine Air Group Six, in training off the West Coast, recently completed without accident 602 landings on an escort carrier in 13½ hours.

The record was made aboard the U.S.S. Matanikau (CVE-101) by pilots of VMF 321 and VMTB 454 undergoing training for carrier duty. The previous record, 484 landings, was held by U.S.S. Ranger.

In its best single hour of operations the Marine

Group made 55 landings, six catapult shots, eight pilot changes and one plane transfer to below deck. Not one mechanical defect marred the day's operations. Fighter pilots, flying Hellcats, average 49 landings an hour for nine hours.

Flying from a carrier for the first time, 20 torpedo and 20 fighter pilots qualified with a minimum of 12 landings each. Some made as many as 19.

Air Power for Infantry

(Continued from page 16)

ship was notable and a welcome change from the battleship-borne Joint Operations Unit. At Tarawa, the salvoes of the main batteries of the U.S.S. Maryland jarred delicate transmitters off their frequency and gave the air liaison parties a merry chase picking up the control unit.

Between the Marshalls and the Marianas engagements, numerous modifications in equipment and minor changes in procedure were made. The Saipan campaign opened promisingly for close air support, but was hauled up short when the Jap task force entered the neighborhood. The ditching of gas-short aircraft, after turning back the Jap fleet, reduced considerably the availability of aircraft for a good part of the campaign.

By the Tinian landing, plane losses had been replaced, and ground attack aircraft made a material contribution to the land campaign.

At Guam, after a somewhat muddled first two days, air liaison parties, control unit and air coordinators squared away to a smooth and effective operation. As in the two landings that preceded it, the number of parties on one net strained severely the facilities of the support air request channel. In actual fact, the foregoing parties never appeared on the net simultaneously—but a large enough percentage of the air liaison parties were active at once to force the adoption of Procedure One. This procedure restricts communications with the net control to regimental and divisional liaison parties—a procedure unpopular with battalions.

Development of the tactical situation ashore permitted this to be relaxed in favor of an area priority system, based on need. Thus the Third Division requests were given preference for the first four days and when the First Provisional Marine Brigade started down Orote, they got first call. Successful strikes were brought in by battalion liaison officers working directly with the planes—an unusual procedure.

Peleliu was notable, largely because air support tactics were expanded to include deck level strafing and bomb attacks against targets suited to flat, low approaches. The late Maj "Cowboy" Stout and his F4U squadron hit the pocket at Bloody Nose Ridge with thousand-pounders without endangering the U-shaped marine lines. One photo shows an attacking Corsair just after its drop below the level of the surrounding bluffs. Navy pilots revised their strafing doctrine and combed open AA positions at low-level, point-blank range, with devastating effect.

At Leyte, marine air liaison teams attached temporarily to the First Cavalry caught a concentration of Japs in an open bivouac area on the reverse slope of a ridge just forward of army lines. The planes dived in and worked the area thoroughly. Fifteen hundred dead were found on the slope when the First Cavalry units moved through.

AT IWO, the new and the standard were combines. Beach strafers attacked parallel to the waterline at deck level, walking their .50s through the target areas-a new tactic. As the troops hit the beach, they moved their zone of attack inland, but only enough to allow for a safety margin that was absolute minimum. These attack planes were flying under the naval gunfire trajectory. Later attacks on emplaced AA positions reverted to the steep dive and a 1500-foot pull-out. The pre-Iwo doctrine called for artillery to be lifted for an air strike. At Iwo this was modified to reduce problems of coordination and increase on-target fire. Artillery was classified as a hazard to attacking aircraft if more than two battalions were firing the target to be hit. Battery control halted fire locally when aircraft entered the ordinate. This policy was followed without known casualty to planes, and with far less interruption of ground fire.

For the first time, the Landing Force Air Support Control Unit was manned entirely by marines—a combination of flyers with combat experience, exair liaison officers with at least two landings behind them, plus experienced intelligence and communications officers. By reason of their proximity to the landing force command elements, and fire control sections of attached weapons, good liaison was relatively simple. Easy access to the forward areas permitted on-the-spot inspection of close strikes by personnel of the control unit and checks with infantry commanders solved many minor difficulties before they became major.

In turn, ground commanders could, and did, come back to the control unit to urge consideration of a target, and to thrash out the type and direction of the strike.

The use of a shore-based control unit is a long way from being new. Its advantages are many and obvious. In previous campaigns, ground commanders have indicated that the presence of personnel with first-hand experience in land fighting in the air support control units would be desirable. The Marine Landing Force team fulfilled this qualification, and, in addition, had the advantage of being marines working with marines.

With each operation the potential of close-air support expands. The traditional difficulties will remain, but they are far closer to resolution than they were two operations ago.

Target designation—always a tough nut—will be sharpened and simplified by distinctively colored smokes from artillery, and aviators versed in spotting ground installations. These innovations will all but eliminate situations such as obtained on Iwo (and other campaigns) where a dozen dummy runs were required—with six different ground parties

adjusting each run—before a live pass could come in. One attack so conducted was held up 50 minutes before the striking sections were all on target and ground people satisfied. The strike was admittedly close but an accurate target fix, visible to all concerned, would have reduced the delay by 80 per cent.

Improvement or modification of aircraft ordnance for the destruction of specific types of ground targets will step up the effectiveness of attack planes. On Iwo, rockets holed several pillboxes and blockhouses and killed the occupants but did not demolish the installation itself. In the interval before the marines took the position, the Japs re-manned it. Once or twice it was possible to follow the rocket hit with a hit from a 500-pounder, and in those instances the installation was permanently wiped out. But two direct hits were necessary (one with a 500-pounder on a very small target for bomb drop). A heavier rocket, for instance, would have done the work of both.

Troublesome caves in the northern pocket would have had an abbreviated defensive career if five-second delay fuzes had been used. With such fuzes on the bomb rack, attack planes could have angled their dive to 30 degrees or better, to eliminate skipping, released at 100 to 150 feet for greater accuracy, and gotten clear of the blast. As it was the planes got hits, but delay fuzes would have done the same jobs with fewer planes in less time.

THE old bugaboo of communications still dogs air support. Present difficulties now center around the equipment of the battalion liaison officer. His need of a dependable, durable, light pack set has

only been partly met. Efforts to circumvent this need by jeep-mounted radios have had only limited success. In certain areas on Iwo attempts to bring a radio jeep even as far as the command post drew a volume of enemy fire that caused the local commander to order "that ———— vehicle the hell out of there." In these zones, the teams had to depend entirely on their TBX and the results were far from satisfactory.

Whether or not the SCR-694 is the whole answer to this problem remains to be seen, but experience with the set on Iwo was good. If, as recommended, all liaison teams are so equipped, communications will be improved. As in other branches, better communications in air support mean time saved and confusion avoided.

It's a sure shot that air support won't be perfect on the operations following Okinawa. There are always new and unanticipated problems arising out of a particular tactical situation. Then, there is always something that worked fine last time that, for some unexplainable reason, isn't quite so effective next time—a situation not confined to air support.

At Iwo, close support aircraft joined those other two Sunday punches of the infantry commander, artillery and naval gunfire. Its certain improvement is one of a number of factors which will go far to counteract the Jap's new weapons and tactics. In the air we are definitely boss. We can attack from above long and hard without concern of rebuttal. Close support brings this superior weapon right up to the lines, on call for the infantry commander when, where, and how he wants its. END



A Corsair fighter doubles as a bomber to blast Japs from a gorge behind the Five Sisters peaks on Peleliu. This close support helped the 1stMarDiv mop up caves.

Dark Horse on Iwo

(Continued from page 7)

observation except for the defenders; broken chunky basalt ledges; and many reinforced concrete defenses (the place had been the site of anti-aircraft and coast defenses which had resisted our ships and aircraft in the preliminaries). Facing this onslaught, Boehm was forced back so that his battalion at length held a salient (mainly in the Fifth Division's zone) just short of Hill 362, and curved around a ridge extending southwestward therefrom; it was not an enviable position.

On the right, the Ninth Marines (with the 21st attached through the continual juggling of reserves) had hit a wall. Cushman and Randall in the assault, with Cushman's 2d Bn on the left, were at a standstill along a road 500 yards east of Motoyama, where resistance had stiffened: another nest of pill-boxes and bunkers, with rising ground in rear—the south Hill 362. It was not, Cushman reported, that the line was unbreakable—one fresh company could work through with precise teamwork of weapons and assault technique. A late afternoon coordinated attack might do the trick, and, at 1530, behind artillery and naval gunfire preparation with rolling barrage, the Ninth made its try, only to be held in place by knee-mortar and flat-trajectory fire.

The situation on the night of 2 March, as clarified by the captured enemy map, showed that the Division confronted a final defensive locality as well organized as Motoyama Ridge, if not more so, and on much worse terrain. Frontal attack against either of the 362s would be costly, even if successful. It would be better to get astride the lower center of the ridge, from which one could perhaps turn



Men on Mars: In steaming Iwo sands, marines cooked C-ration as though on another planet.

these hills with whatever maneuver might be possible in cramped Iwo.

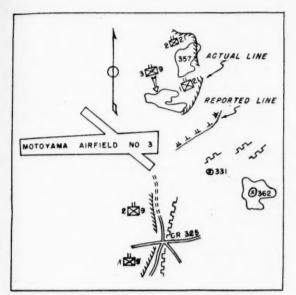
The subsequent days confirmed this notion. On 3 March, after an all-day fire-fight, elements of the Fifth Division finally came even with Boehm on the left, and relieved him where he clung to the fireswept slopes of his Hill 362. In the center, the 1st and 2d Bns of the 21st, now under Houser and Percy respectively, had worked almost due eastward, staying to the north of Airfield No. 3, which was unhealthy, clinging to the rising ground on their left and trying to get forward onto the saddle to their front. Inch by inch, they made it, not in a day, but, by the night of 4 March, Percy held a nose which more or less overlooked the sea, and which at any rate secured the Division's left boundary against incursions from Hill 362 to the north. At right angles to his line, facing due south, ran Houser's 1st Bn, 21st Marines, with its right more or less in the air. Between Houser and Cushman. who had the Ninth Marines' left battalion, there was a gap, "covered," as some wag put it, "by firefrom the Nips." In the angle between Houser and Cushman lay the upper end of the iron resistance which had stalled the Ninth. Cushman's Pocket, they called it.

BY 5 March, despite determined attacks, and every possible combination of weapons support, it was evident, even to Corps, that the advance was stalled-not only for the Third, but, due to stiff resistance, in far adjacent divisions as well. As it was not possible to get the fresh Third Marines, still held afloat in reserve, the decision was taken to employ Sunday, 5 March, as a day of regrouping and reorganization, while all the supporting weapons had a go at Hill 362 (south). The 12th Marines fired continually, as did the Division's fire-support ships, and a powerful air-strike went in. When it was all over, relates the war-diarist, "Enemy sniping, small arms and mortar fires continued active.' So a further super-preparation was planned, including a time-on-target (TOT) shoot by everything that could fire. But at the conclusion of the day (6 March) there was little to show for it.

The situation was becoming critical. Elements of the Division, it is true, were atop the last ridge-line in enemy hands, but the high ground to left and right, especially the latter, was firmly held by the Nips. The terrain and the closeness of combat virtually ruled out effective use of supporting weapons. It was a rifleman's problem, a matter for BARs, flamethrowers, pole-charges, and teamwork.

On the afternoon, therefore, of 6 March, Gen Erskine employed tactics unique in this operation. and so far as was known, hitherto unemployed in the Pacific theater: a coordinated night attack to seize Hill 362 (south).

We still have a right-angled reentrant in our lines, between the left battalion of the Ninth, facing east, and the right battalion of the 21st, facing

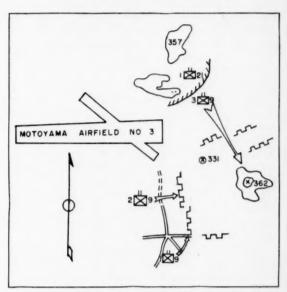


Situation prior to night attack, 6 March.

south. Midway in this reentrant is Hill 331, a subsidiary nose some 300 yards short of Hill 362. The plan is to have Boehm's 3d Bn of the Ninth (still attached to the 21st) as its chosen instrument: Boehm attacks southward, down the ridge, jumping off at 0500 from the forward positions of the 1st Bn, 21st Marines, while the battalions of the Ninth attempt to move forward at the same time. All illumination in the Corps zone will be checked at 0450. The artillery will fire random harassing concentrations of mixed smoke and HE during the night-at 0455, they will hit Hill 362 with five minutes of smoke. There is no opportunity for the reconnaissance that Boehm would like, but he can get most of the dope from Houser, whom he passes through.

In the Division CP, the staff checked watches; it was 0430. Every few minutes someone would look outside through the foul and rainy weather. If a burst of fire or a stray round was heard, faces At 0450, the illumination slacked and ceased. Five more minutes, and there followed the familiar crack and swish of an outgoing harassingconcentration from the artillery: you could set a watch by the 12th Marines. Then, at King-hour, a star-shell burst. Hadn't all illumination been checked? Get the naval gunfire officer! It was a Fourth Division ship, he reported, and lunged to the field phone and radio. Meanwhile, word came back that the attack had jumped off. Still no sound. Were they moving at all? Had the steaming earth swallowed them?

It was dawn before the answers came. First report: Boehm is on Hill 362. They are killing Nips in the open with flamethrowers as they stumble out of their caves. Scattering fire is coming from the rear. We have advanced 400 yards with not a scrap



The attack as delivered, 0500 on 7 March.

of resistance for the first 40 minutes, and then nothing to speak of.

Daylight brought a further report. is not 362-it is 331 that we overran. But Boehm is halfway up 362 now. By the mischance of war, the Line of Departure had been farther back than anyone had thought. An advance of 400 yards from the assumed position would have made it 362, but from the actual lines it was 331. At first daylight ("Early dawn," Stonewall Jackson would have put it). Boehm got his bearings and took in the situation. His reaction was immediate: launch a coordinated attack while they are still back on their heels. Behind artillery preparation, then, at 0705 the attack was resumed, and by nightfall it could be reported that the resistance was largely broken. that disintegration had set in, that even the longsuffering Ninth Marines, still confronting the dug-in tanks of Cushman's Pocket, had picked up a hundred yards or so, which represented quite a gain.

On the left, at the other 362 and its adjacent high ground, Percy's 2d Bn of the 21st was overlooking the sea and covering the flank. Percy's positions overlooked a barren, flat stretch of beaches commanded to seaward by enemy caves set thick in the cliffs. When marines went down those cliff-faces, intense flanking fire had burst forth from Nip positions on the reverse slopes of 362 in the Fifth Division zone. It was decided that Percy should wait, and advance as the Fifth advanced, covering the beaches by fire, and mopping them up at leisure.

(Much more might be related of the final push to the sea through confused, desperate Nip resistance, until men of A Company, 21st Marines, scooped up a canteen full of sea-water from the beaches in their zone, and relayed it back to the Corps Commander with the now famous quotation: "For inspection, not consumption." The elimination of every pocket would be a story in itself, like the struggle for Boehm's Nose, on the Fourth Division boundary, or the day when Duplantis personally manned a 7.2inch rocket-truck to blast out resistance on Hill 202-A. But there is another matter to be considered, now that the Division's zone is secured.)

Up to date, we have treated the Third Division's drive up Iwo Jima as a matter of battalions, of situations and tactics. Like the communiques, we spoke in a matter-of-fact way of "preparation by artillery, air and naval gunfire." But, as any marine knows, there is more than that, and the coordination of all weapons was a noteworthy feature. There are other features: the 12th Marines; fire-support ships and navy men and marines of the shore fire-control parties; the coordinated air-strikes by carrier-planes.

The Third landed on Iwo, fortunate in having already laid the foundations of weapons support not only through training on all levels, but because all staff sections and officers had considered it their jobs to know the characteristics, limitations and problems of other outfits. Thus, when a war correspondent drifted into the supporting-arms tent one day, it was the air officer who lectured him on artillery methods, while the gunfire and artillery officers presented each others' specialty. The relationship was grounded in personal friendship. One of the Division SOPs put it, "effective coordination of supporting arms is the product of close, personal liaison on all levels."

Each night, when the next day's battle-plan was being prepared, the artillery, air and naval gunfire officers would prepare a joint plan of fires, exchanging targets and information, freely modifying each other's commitments and making adjustments based upon mutual understanding of problems and limitations. When the thing was complete, they would present it together to the G-3, Chief of Staff, and the General. Lord help the man unable to justify a concentration or give a clear explanation to Gen Erskine.

During routine operations, artillery, air and naval gunfire were coordinated through a supporting-arms tent, a separate blackout into which were trunked all communications for the three: direct line to the 12th Marines fire-direction center; lines to air and naval gunfire radio-centrals; regular lines off the Division switchboard; and a direct line to the V Corps supporting arms switchboard which handled calls to the corresponding V Corps sections and provided lateral communication with the other divisions.

In addition, however, to being an efficient central for the planning, coordination and direction of the massed fires which became synonymous with a Third Division assault, the supporting-arms tent was the best short-order restaurant in the CP. Meat and beans, 10-in-1 ration bacon, a fried egg or so. A haggard observer would stagger in from the lines with an inch of ash around his deep-sunk eyes.

Have a Suribachi Screamer, it'll make you feel better: sick-bay alky and fruit juice.

At all times of critical operations the staff would be together, as likely as not with the General, the Chief of Staff and G-3. Otherwise, they would still be in immediate reach by wire communication. An important decision or recommendation on supporting weapons was never reached without joint concurrence.

And this paid off. Instead, for example, of the air officer trying to achieve victory through airpower, he would examine a target to see if one of the others couldn't use it and weigh the relative value of the strike against the loss through cessation of other fires. Net result: the Division requested few air strikes, but got a high percentage approved. Coordination between artillery and naval gunfire was absolute and complete — when ammunition afloat was low, the artillery would extend itself; vice versa, it was no uncommon thing to see 5-inch fires being pulled in to 100 yards of friendly troops when the 105s were pressed for shells.

R ECALL that we left Percy's 2d Bn of the 21st still waiting to advance. The Fifth faces a stubborn pocket in an impossible piece of terrain to the front so that it cannot readily advance, especially as the pocket is covered by enemy fire from high ground in rear, the northern massif of the island, sloping away from Hill 362 (north), on the flanks of which Percy still waits. With the Fifth stalled, why not turn the job over to the Third?

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On the night of 15 March, word came down to the 21st Marines: tomorrow you will attack northward to clean out the upper end of the Fifth Division's zone; boundaries will be redrawn so that we get everything east of the ridge which runs from 362 up to Kitano Point; you will relieve elements of the 27th Marines along the Division left boundary, and attack behind our usual preparation; the Fifth says that the area is tough—another den of basalt crags with pillboxes and caves.

Next morning, with Percy and Houser in the assault, Percy's 2d Bn on the left, the 21st relieved the 27th and attacked behind a scorching preparation. The rolling barrage of naval gunfire and artillery churned up the troublesome zone right to the sea.

Enough was enough. The rain of fire forced the Japs into ground, only to be flushed out by riflemen. By 1000, word came in from Withers, who commanded the 21st, there are more Nips running around here than we've seen in all the campaign. Both battalions are moving right out. The going is naturally a little harder on the left for Percy as he moves down the ridge. We'll be at the sea before dark.

He was better than his word. By 1330, both assault battalions were on the beaches in their zones, and mopping up was underway and, at 1800, Iwo was secured.



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Latest Word

Lower Rail Fares, More Furlough Gas, New Tax Delay, JAG Ruling, Station Changes.

To marines arriving States-side, the open-gap reduced railroad fare sold at 41 port cities saves money. When a marine puts in at San Diego and is ordered to Boston, with leave at Pittsburgh, he presents his papers at the ticket window showing he has arrived from overseas or from a Government commissioned ship, and buys a one-way open-gap ticket to Boston, thus getting the round trip rate for a one-way ride, plus stopover. These tickets are for use only in connection with the following cities:

Annapolis; Astoria, Ore.; Baltimore; Bath, Me.; Boston, Bremerton, Wash.; Charleston; Corpus Christi, Tex.; Galveston; Jacksonville; Key West; Long Beach; Mare Island; Miami; Mobile; New London, Conn.; New Orleans; Newport, R. I.; Newport News; New York; Norfolk; Noroton, Conn.; Oceanside; Old Point Comfort, Va.; Pensacola; Philadelphia; Port Arthur, Tex.; Portland, Me.; Portland, Ore.; Portsmouth, Va.; Port Royal, S. C.; Providence; San Diego; San Francisco; San Pedro; Savannah; Seattle; Tacoma, Wash.; Washington, D. C., and Wilmington, N. C.

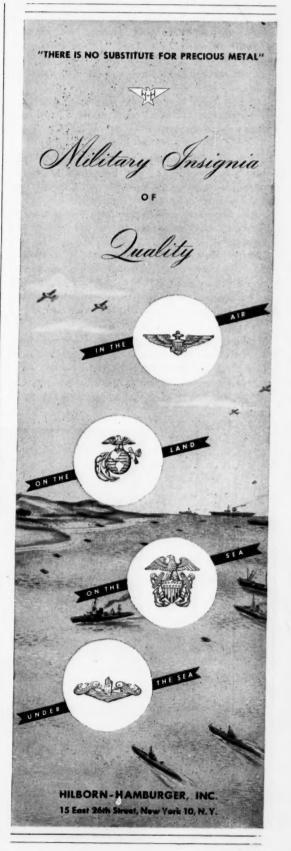
If the marine is going to Pittsburgh, then back to San Diego, he should buy the round-trip reduced rate fare, at 11/4 cents a mile second class, sold by all railroads.

Still another reduced fare is available for marines on leave, pass or furlough from points on the Santa Fe, Southern Pacific, Western Pacific and Union Pacific in California, Oregon and Washington. This is a one-way ticket at 1½ cents a mile, second class, to any point in the U. S. via authorized ticketing routes, and good for 15 days after purchase. For further information on reduced fares and redeeming unused tickets, read BuPers Circ. Ltr. 78-45 (NDB, 31 March, 1945, 45-312).

Marines returning from overseas for "rehabilitation, recuperation and recovery" may draw furlough gasoline rations under a new OPA ruling. Formerly, the ration was given to marines on leave or furlough for three or more days, who could prove it with leave or furlough papers. Such papers are now issued on temporary duty orders for 30-day periods. The ration provides one gallon of gasoline for each day of furlough, leave or temporary duty, with a 30-gallon maximum.

Overseas marines get an additional extension on income tax obligations under the ruling designed to help servicemen from the ETO, who stop in the United States on their way to the Pacific theater.

The Treasury Department says the postponement



will continue until an overseas serviceman has been back in the United States for a continuous period of five and one-half calendar months, not counting the month in which he returns. Formerly, the tax postponement of an overseas serviceman expired after he had been back three and one-half calendar months.

The first \$1500 of active service pay of a serviceman is exempt. Hence, most enlisted men and women owe no taxes.

A marine exclusively on temporary duty, or temporary additional duty, who goes into a combat zone no longer rates an area campaign medal "unless the duties performed by him during his stay in the area are considered by the Area Commander to have materially contributed to the progress of the campaign."

Marine officers whose permanent duty station is within the continental limits and who, because of temporary duty orders, believe they are eligible for one or more of the three area campaign medals must obtain approval from the Commandant.

Uniforms worn on holidays or at veteran functions by discharged marines must bear a golden yellow cloth emblem above the right pocket. The insignia resembles the metal lapel button, worn by veterans of this war. The cloth background is

lozenge-shaped, the same color as the uniform.

The insignia will not be issued to personnel discharged for the purpose of reenlistment, or to those on inactive duty but not separated from the Corps. Wa

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Letter of Instruction No. 1044, 12 June 45, forbids the issue of chevrons for wear on the utility coat. When authorized by commanding officers, appropriate rank insignia may be stenciled on the sleeves.

Gen Joseph W. Stilwell, TENTH ARMY Commander, doubts the necessity of extensive retraining for soldiers being redeployed from Europe to the Pacific. At Okinawa, he said that what he had seen there and in the Philippines had convinced him war is much the same everywhere, and ETO troops can pick up cave warfare in a week.

Phonograph records may be sent overseas to marines. Recordings must be properly packed, must not weigh more than five pounds and must be no larger than 36 inches in length and girth combined. This applies in the Navy, only, and not to Army personnel.

A medal for veterans of World War II is urged in a bill introduced by Representative Andrews, N. Y. The bill would authorize the Secretaries of



War and Navy to procure an appropriate medal to be awarded to all personnel who shall have served honorably on active duty during the period beginning 7 Dec 1941 and ending with the official termination of the war.

No mention of the reason for a person's discharge from the naval service is made on the notice of separation form, nor are remarks included which refer to such matters as medical survey, unsuitability to military life, unstable behavior, etc. This policy was established so that the notice of separation would aid dischargees in obtaining civilian employment. Where forms have been erroneously issued containing the reason for discharge, corrected copies may be requested by writing BuPers and forwarding incorrect certificates.

The Navy's Judge Advocate General has held that a lieutenant (jg) of the Regular Navy, serving in temporary rank of lieutenant, and retired for physical disability while serving in that rank, was entitled to advancement to lieutenant commander because he had been commended for performance of duty in combat through the issuance of a Navy Cross and a Gold Star in lieu of a second Navy Cross.

Change Sheet

LTGEN HOLLAND M. SMITH from overseas to duty as Commanding General, Training and Replacement Command, San Diego Area.

MAJGEN EARL C. LONG from overseas to duty as Commanding General, Marine Base, San Diego.

MAJGEN JAMES L. UNDERHILL previous orders from overseas to Hqs revoked; admitted to hospital, San Diego.

MAJGEN FRANCIS P. MULCAHY from overseas to Hgs aviation.

MAJGEN RALPH J. MITCHELL from MarFairWest to Cherry Point.

MAJGEN CHARLES F. B. PRICE from San Diego Area to home, inactive duty; retired list 1 Oct 1945.

BRIGGEN WILLIAM A. WORTON from Hospital, San Diego, to overseas.

BRIGGEN ARCHIE F. HOWARD from San Diego to overseas.

BRIGGEN OLIVER P. SMITH from overseas to Quantico.

COL JOSEPH A. SMOAK from MarFairWest to overseas.

COL ZEBULON C. HOPKINS from MarFairWest to Cherry Point.

COL LYLE H. MEYER's previous orders to Cherry Point modified; to El Centro.

COL THOMAS D. MARKS from Pendleton to overseas.

COL HERBERT P. BECKER from Hqs to overseas. COL SAMUEL A. WOODS JR. from hospital, Philadelphia, to Portsmouth.

(Continued on next page)

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COL MERLIN F. SCHNEIDER from San Diego Area to Klamath Falls.

COL JOHN S. LETCHER from overseas to Norfolk, Va.

COL GEORGE O. VAN ORDEN from Klamath Falls to overseas.

COL WILLIAM L. BALES to retired list; continue active duty.

COL CHARLES T. BROOKS from San Diego Area to San Francisco.

COL WILLIAM C. JAMES from overseas to Hqs.

COL WILLIAM O. BRICE from Hqs to overseas.

COL EVANS F. CARLSON to Hospital, San Diego.

COL HAROLD C. PIERCE from Hospital, Chelsea, Mass., to Camp Lejeune.

COL BERTRAND T. FAY from Boston to home; inactive duty.

COL WALKER A. REAVES from Hqs to overseas.

COL PETER P. SCHRIDER from Miramar to Quantico.

COL RAYMOND E. HOPPER from Cherry Point to overseas.

COL GEORGE E. MONSON from Parris Island to Hqs.

COL JOSEPH A. ROSSELL from Portsmouth to home to await retirement.

COL HOMER C. MURRAY from Quantico to over-

COL PERRY K. SMITH from MarFairWest toHqs.

COL CHARLES G. MEINTS from San Diego to overseas.

COL HARRY E. DUNKELBERGER from Hqs to overseas.

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LTCOL CHARLES R. LUERS from El Toro to over-seas.

LTCOL EDWIN C. AIKEN from Naval Academy to overseas.

LTCOL BERNARD S. BARRON from San Francisco to home; inactive duty.

LTCOL JAMES C. MURRAY JR. to Hospital Bethesda.

LTCOL LOUIS C. REINBERG on completion of temporary duty, Fort Sill, to San Diego Area.

LTCOL KENNETH D. KERBY from overseas to Hqs aviation.

LTCOL JOHN L. SMITH from MarFairWest to Cherry Point.

LTCOL DONALD N. OTIS from Quantico to Lejeune, LTCOL LEE C. MERRELL JR. from MarFairWest to temporary duty at Coronado, then overseas.

LTCOL ARTHUR C. SMALL from Parris Island to home; inactive duty.

LTCOL ROBERT E. GALER from MarFairWest to Corpus Christi.

LTCOL ARTHUR L. ANDREWS from overseas to San Diego Area.

LTCOL WILLIAM M. HUDSON from Hqs to overseas.

LTCOL MARVIN C. STEWART from Quantico to overseas.

LTCOL WILLIAM I. PHIPPS from San Diego Area to overseas.

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LTCOL CARLTON A. FISHER from San Francisco to home; inactive duty.

LTCOL DONALD M. WELLER from overseas to San

LTCOL JAMES C. BIGLER from San Diego Area to

LTCOL ALEXANDER A. VANDEGRIFT JR. from Hgs to Quantico.

LTCOL FRANCIS S. KIEREN'S orders from Louisville to inactive duty revoked.

LTCOL EDWARD C. PARKER'S orders to duty Cherry Point revoked; to overseas.

LTCOL FREDERICK BELTON from Has to over-

LTCOL LOWELL E. ENGLISH from San Francisco to Hospital, Bremerton.

LTCOL FREDERICK E. LEEK from MarFairWest to 11th Naval District aviation.

LTCOL KENNETH P. CORSON from overseas to

LTCOL CHARLES A. RIGAUD from Quantico to overseas.

LTCOL JAMES E. MILLS from San Diego Area to

LTCOL VIRGIL M. DAVIS's orders to San Diego Area modified: to Boston.

LTCOL MARION A. FAWCETT from San Francisco to Hospital, Bethesda.

LTCOL SIDNEY S. WADE from San Diego to Quantico.

LTCOL ROBERT BELL detached from Hgs to home; inactive duty.

LTCOL WILBUR J. M'NENNY from San Francisco to Quantico.

LTCOL ROBERT A. BLACK from Cherry Point to overseas.

LTCOL CLIFFORD PRICHARD from Bremerton, Wash., to home; inactive duty.

LTCOL RICHARD N. JOHNSON from Washington to overseas.

LTCOL CHARLES W. MAY's orders to San Diego Area modified; to duty at Earle, N. J.

LTCOL ROBERT E. FOJT from overseas to Camp Lejeune.

LTCOL PAUL R. COWLEY's orders to Earle, N. J., modified; to duty at New York.

LTCOL FLOYD R. MOORE's orders to Hqs revoked; to Ouantico.

LTCOL ROBERT J. HOEY from MarFairWest to Cherry point.

LTCOL JOHN L. WINSTON from MarFairWest to Cherry Point.

LTCOL ALEXANDER B. SWENCESKI from Hgs to overseas.

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Practically all marines who had mumu are back in ranks, Tokyo-bound, physically fit.

Rumor-mongers won't like this but: Filariasis is on the way out;

A case of filariasis does not mean that elephantiasis is bound to follow;

Filariasis does not prevent paternity. Dozens of marines who contracted mumu have subsequently become fathers of healthy babies.

THERE is not a single known case of elephantiasis in the Marine Corps, and the filariasis problem has diminished to the point of minor importance. Japanese papers please copy; Tokyo Rose please note.

The marines who trained in Samoa are not, as Rosie sadly predicted, walking around on animated tree stumps, burdened with arms as large as Popeye's. They're wearing GI shoes and they don't need wheelbarrows.

She'll soon see that for herself, because 92 per cent of the mumu patients who took treatment at the Marine Barracks, Klamath Falls, Oregon, are back in ranks, destination Tokyo. With few exceptions, the rest are due for full duty in a matter of months.

Which is not the way Rosie told it in her broadcasts when she was wailing all over the ether about handsome young marines afflicted with the "dread disease." That, of course, was in 1943, when even our Navy doctors were not optimistic.

The number of men in the Navy with malaria and filariasis back in 1943 and 1944 aroused considerable concern, because it was recognized then that prolonged hospitalization was not the solution. A registry shows there were at least 9500 diagnosed cases of filariasis in the Navy, 8200 of them marines, the rest mostly seabees and corpsmen.

The problem was disposition, because the Navy had forbidden the separation of malaria or filariasis patients from the service, and they could not at that time be sent back to endemic areas. States-side line outfits considered them unfit for duty, so they spent most of their time at hospitals and limited duty stations. As their acute attacks were of short duration, they were constantly on transfer lists.

Then it was decided to mass the worst of these patients at a barracks at Klamath Falls, Oregon, a salubrious mountain site, nearly a mile high, where outdoor recreation opportunities abound. In designation

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nating this a "Marine Barracks" the words "recuperational," "convalescent" or "hospital" are omitted to avoid hurting the feelings of proud men, or intensifying neurotic reactions.

General objective is to keep the men occupied mentally and physically at all times. The medical program is set up to observe the clinical course of malaria and filariasis, and to evaluate any new drugs or diagnostic procedure. All personnel suffering from tropical diseases are treated until they regain full health.

Men who languish in hospitals rapidly deteriorate, both mentally and physically, especially when incapacitated only a few days each month. Constant activity, not carried to the point of exhaustion, keeps the men fit, helps the body throw off existing infections, and at the same time fosters psychological and spiritual reconditioning.

As personnel are not carried on the sick list except when suffering a relapse, they retain promotion rights and other privileges, an important morale factor. Psychologically, the Barracks is overcoming the conviction of thousands of men that they have an incurable disease. If allowed to brood, many would lose all value as marines and eventually become permanent wards of the government.

The results after one year show success:

Approximately 5 per cent of all filariasis cases reported to sick call daily, at first, but the conditioning program, plus assurance that the disease is only a mild infection without likelihood of sequelae has reduced this percentage to less than 0.3 per cent.

There has not been a single case of elephantiasis (some infections are now in their fourth year), and thousands of blood searches have failed to reveal any circulating microfilaria.

Although nearly all the men come from hospitals or dispensaries, only 20 men have been hospitalized in one year for filariasis, and they have been in bed for an average of only six days.

The adverse mental attitude and apprehension as to sterility and disfigurement, so prevalent a year ago, has practically disappeared.

It has been necessary to survey medically from the Service less than 100 men in a total of 4700 combat troops sent to Klamath Falls, about one-half of whom had filariasis. All were for causes other than malaria or filariasis such as bone injuries and arthritis. This is probably a record of some degree.

Most mumu patients have no difficulty with their occasional flare-up, but were initially convinced they will be washed up for life. Fighting this attitude with an activity program, Klamath has demonstrated clearly the abuse of rest, so frequently encountered in both military and civilian medicine. The Klamath pattern will keep servicemen in training while convalescing, and at the same time prevent mental deterioration.

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Marine Corps Not Adopting Point Discharge System

There will be no discharge of marines under a point system like that of the Army, Headquarters has announced, because "it would result in an appreciable decrease of combat efficiency due to loss of available manpower in training replacements and transporting them to the theater of operations."

The Commandant said that "when partial demobilization of the Marine Corps is directed by higher authority, it is the present plan of this headquarters to inaugurate a formula for release which will insure a rapid, equitable and orderly demobilization of Marine Corps personnel. Plans to that end are being made the subject of continuing study with an idea to keeping them flexible in order to take advantage of changing circumstances in the Pacific. It is believed that specific commitment as to the release formula, if made at this time, would be subject to change, thereby causing possible disappointment and misunderstanding."

Current policies permit, in certain instances, discharge of officers and enlisted men of limited or specialist classification, and enlisted men over 38 years old, whose services are no longer essential. Especially for Marines . . .

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The row that rages across the chow tables of the Pacific is settled in tabular form, with at least one gumbeat to a line.

Maps of Japan

Might as well get familiar with the Land of the Setting Sun, as most signs and indications point to Nippon as the marines' next duty station.

Okinawa Finale

MajGen Pedro A. del Valle tells how his 1stMarDiv wound up its campaign south from Shuri, while 1st Lt Alan I. Shilin describes the Sixth's closing operations.

Street Fighting

Just in case Hirohito's city dwellers decide to go down the hard way, Capt M. E. Holt describes the hard way for them, the easy way for us.

Night Attack

Col Ironpants, LtCol Wolf and Maj Slick, as reported by Col Sam B. Griffith, show how sound field orders can beat the Jap at night fighting—his own game.

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